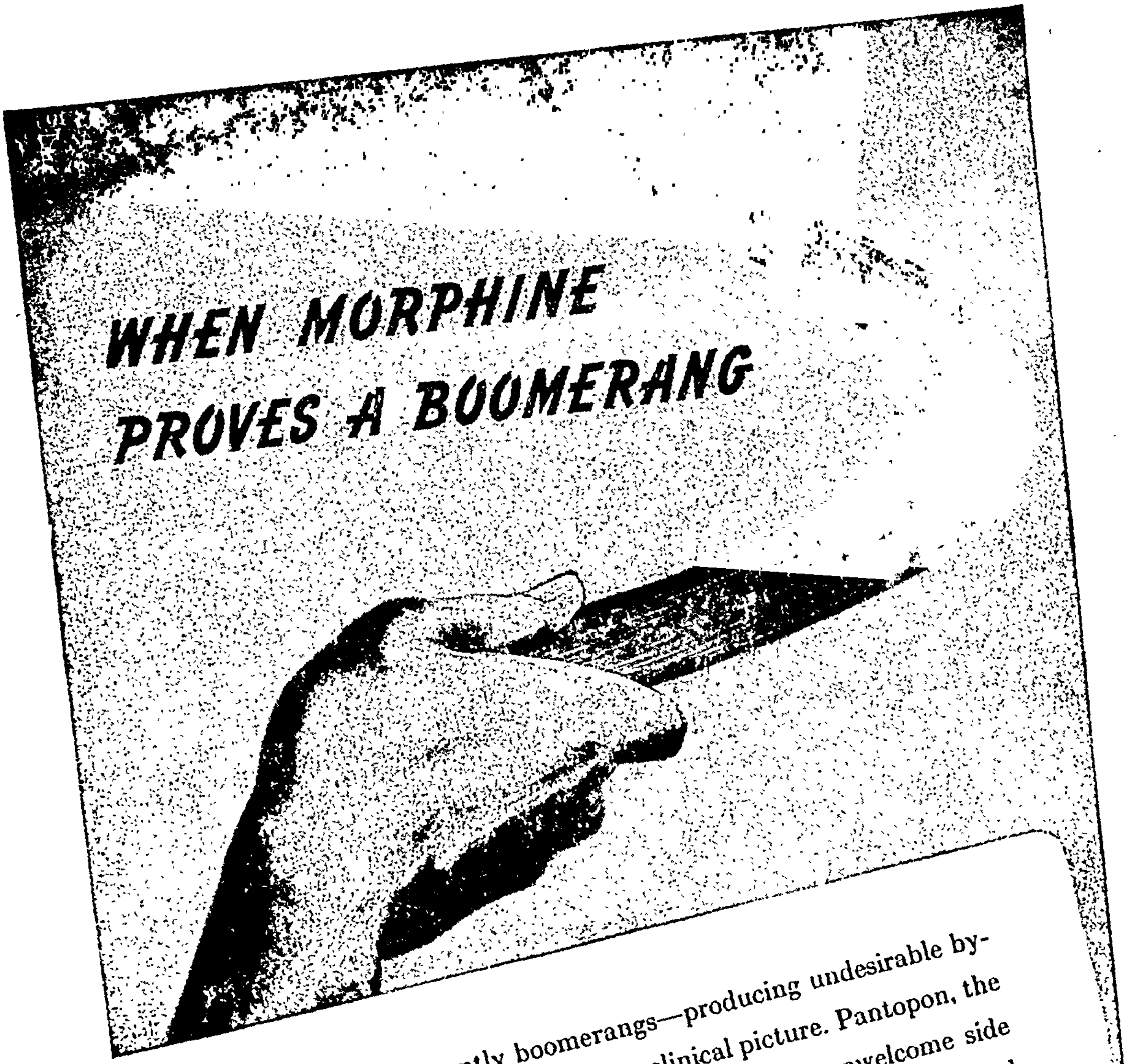

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In Conjunction with Eighth National Assembly of
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OF
INTERNATIONAL COLLEGE OF SURGEONS
WAR SURGERY AND REHABILITATION PROGRAM
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For place and exact date of meeting of the House of Delegates of the United States Chapter, see bulletin board of the Assembly Headquarters.

CONSTITUTION OF THE UNITED STATES CHAPTER OF THE INTERNATIONAL COLLEGE OF SURGEONS

ARTICLE I.

Section 1. The name of this organizaton shall be the United States Chapter of the International College of Surgeons.

Section 2. By official action of the International College of Surgeons and by virtue of a charter issued by the central organization founded in Geneva, Switzerland, 1935 and incorporated in Washington, D. C., in 1940, the United States Chapter exists as a national chapter of the International College of Surgeons, having jurisdiction over the United States and its territories.

Section 3. The Seal of the United States Chapter shall be the seal of the parent body, but with the words, *"United States Chapter of the International College of Surgeons Founded in Geneva, Switzerland, 1935, and corporated in Washington, D. C., 1940"* thereon.

ARTICLE II.

Purposes. The Purposes of the United States Chapter are the same as those of the International College of Surgeons as outlined in Article II of the Constitution of the International College of Surgeons.

ARTICLE III.

Membership. The membership of the United States Chapter, the conditions of eligibility, the examinations and the diplomas shall be the same as outlined in Article III and its various sections of the Constitution of the International College of Surgeons except that an applicant for Membership rank shall devote most of his time to surgery.

Section 1. An applicant for Associate Membership, Membership, or Fellowship in the United States Chapter of the International College of Surgeons shall produce evidence of membership in the American Medical Association. Membership in other recognized surgical societies, while not mandatory is highly desirable. Fellowship in the Royal College of Surgeons of England, Scotland, Ireland, Canada, etc., the Australian College of Surgeons, the American College of Surgeons, the Brazilian and other accredited colleges of surgeons, the Academy of Surgeons of Buenos Aires and members of similar recognized academies and university faculties throughout the world will receive proper recognition.

Certification of an applicant by the American Board of Surgery, the American Board of Gynecology and Obstetrics, the American Board of Ophthalmology, the American Board of Otolaryngology, or by any other examining board organized under the auspices of the Council of Medical Education of the American Medical Association or of the American College of Surgeons, shall be appropriately credited without these certifications being in any way mandatory.

ARTICLE IV.

Subdivision. Districts of the United States Chapter. The United States and territories of the United States shall be divided into districts for the efficient conduct of organization activities. This division is to be made solely for the purpose of simplifying the administrative and teaching details of the chapter by forming groups with memberships of such size as to make compact and efficient organization practicable. All districts are to be encouraged to invite adjoining districts to participate in their educational activities. The arbitrary divisions are to be made by the Executive Council and may be changed at the request of any districts concerned.*

ARTICLE V.

District Regents. There shall be one for each district, elected from the Fellows of the district by ballot, by the entire membership of each district and they shall be approved by the Executive Council.

They shall act as delegates to the National Assembly and be members of the Board of Governors.

They shall be elected for a term of two years and hold office synchronous with the President of the United States Chapter.

ARTICLE VI.

Specialties. Specialties recognized as eligible by the United States Chapter are the same as those outlined in Article IV of the International Constitution.

ARTICLE VII.

Clinical Groups or Guilds: These shall operate according to Article V of the International Constitution. However, they shall meet at least twice a year and function according to Article XI of the By-laws of the United States Chapter.

ARTICLE VIII.

The Duties and Rights of the various memberships shall be as outlined in Article II of the International Constitution.

ARTICLE IX.

Failure to Pass Examinations, Fees and Dues, Distribution of Fees and Dues are covered by Article VII, Article VIII, and Article IX of the International Constitution except that the Associate Members shall pay a total entrance fee of $50.00.

ARTICLE X.

The *National Officers* shall be as follows:

1. The National President.
2. The President-elect.
3. The Immediate Past-President.
4. The National Vice-Presidents.
5. The National Treasurer.
6. The National Executive Secretary.
7. The Chairman of the Board of Examiners.
8. The Editor-in-Chief of the Journal of the International College of Surgeons.

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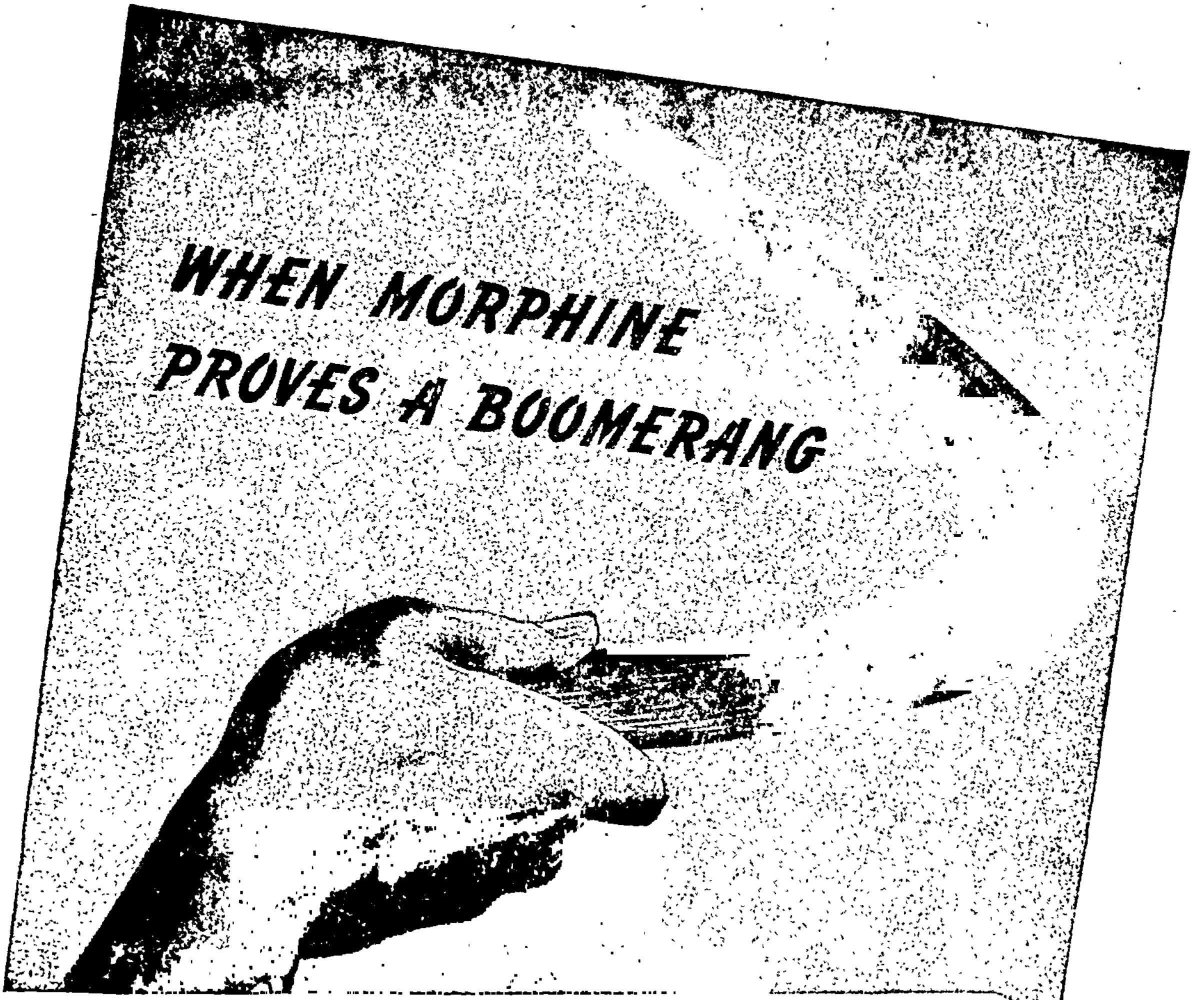

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Revised form of the Constitution and By-laws of the United States Chapter of the International College of Surgeons, as approved by the Executive Council of the United States Chapter, and as approved by the International Board of Trustees of the International College of Surgeons and finally ratified by the latter, to be presented for ratification at the Assembly to be held at the Waldorf-Astoria Hotel, June 14, 15, 16, 1943.

For place and exact date of meeting of the House of Delegates of the United States Chapter, see bulletin board of the Assembly Headquarters.

CONSTITUTION OF THE UNITED STATES CHAPTER OF THE INTERNATIONAL COLLEGE OF SURGEONS

ARTICLE I.

Section 1. The name of this organizaton shall be the United States Chapter of the International College of Surgeons.

Section 2. By official action of the International College of Surgeons and by virtue of a charter issued by the central organization founded in Geneva, Switzerland, 1935 and incorporated in Washington, D. C., in 1940, the United States Chapter exists as a national chapter of the International College of Surgeons, having jurisdiction over the United States and its territories.

Section 3. The Seal of the United States Chapter shall be the seal of the parent body, but with the words, "*United States Chapter of the International College of Surgeons Founded in Geneva, Switzerland, 1935, and Incorporated in Washington, D. C., 1940*" thereon.

ARTICLE II.

Purposes. The Purposes of the United States Chapter are the same as those of the International College of Surgeons as outlined in Article II of the Constitution of the International College of Surgeons.

ARTICLE III.

Membership. The membership of the United States Chapter, the conditions of eligibility, the examinations and the diplomas shall be the same as outlined in Article III and its various sections of the Constitution of the International College of Surgeons except that an applicant for Membership rank shall devote most of his time to surgery.

Section 1. An applicant for Associate Membership, Membership, or Fellowship in the United States Chapter of the International College of Surgeons shall produce evidence of membership in the American Medical Association. Membership in other recognized surgical societies, while not mandatory is highly desirable. Fellowship in the Royal College of Surgeons of England, Scotland, Ireland, Canada, etc., the Australian College of Surgeons, the American College of Surgeons, the Brazilian and other accredited colleges of surgeons, the Academy of Surgeons of Buenos Aires and members of similar recognized academies and university faculties throughout the world will receive proper recognition.

Certification of an applicant by the American Board of Surgery, the American Board of Gynecology and Obstetrics, the American Board of Ophthalmology, the American Board of Otolaryngology, or by any other examining board organized under the auspices of the Council of Medical Education of the American Medical Association or of the American College of Surgeons, shall be appropriately credited without these certifications being in any way mandatory.

shall be divided into districts for the efficient conduct of organization activities. This division *is to be made solely for the purpose of simplifying the administrative* and teaching details of the chapter by forming groups with memberships of such size as to make compact and efficient organization practicable. All districts are to *be encouraged to invite adjoining districts to participate* in their educational activities. The arbitrary divisions are to be made by the Executive Council and may be changed *at the request of any districts concerned.**

ARTICLE V.

District Regents. There shall be one for each district, elected from the Fellows of the district by ballot, by the entire membership of each district and they shall be approved by the Executive Council.

They shall act as delegates to the National Assembly and be members of the Board of Governors.

They shall be elected for a term of two years and hold office synchronous with the President of the United States Chapter.

ARTICLE VI.

Specialties. Specialties recognized as eligible by the United States Chapter are the same as those outlined in Article IV *of the International Constitution.*

ARTICLE VII.

Clinical Groups or Guilds: These shall operate according to Article V of the International Constitution. However, they shall meet at least twice a year and function according to Article XI of the By-laws of the United States Chapter.

ARTICLE VIII.

The Duties and Rights of the various memberships shall be as outlined in Article II of the International Constitution.

ARTICLE IX.

Failure to Pass Examinations, Fees and Dues, Distribution of Fees and Dues are covered by Article VII, Article VIII, and Article IX of the International Constitution except that the Associate Members shall pay a total entrance fee of $50.00.

ARTICLE X.

The *National Officers* shall be as follows:

1. The National President.
2. The President-elect.
3. The Immediate Past-President.
4. The National Vice-Presidents.
5. The National Treasurer.
6. The National Executive Secretary.
7. The Chairman of the Board of Examiners.
8. The Editor-in-Chief of the Journal of the International College of Surgeons.

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International College of Surgeons

Volume VI JANUARY-FEBRUARY, 1943 *Number 1*

The Diagnosis and Treatment of Tumors of the Upper Urinary Tract*

ELMER HESS, M.D., F.A.C.S., F.I.C.S.
ERIE, PENNSYLVANIA

IT IS comparatively easy to recognize tumor in the upper urinary tract where there is a palpable mass in the region of the kidney and where typical defects in the pyelogram are found. However, there are many pitfalls in the diagnosis. It is necessary to differentiate extra-renal tumors from those of the pelvis, upper ureter, and the parenchyma. Adrenal tumors, tumors of the head of the pancreas, adrenal rest tumors originating in the renal capsule, retroperitoneal sarcomata, hydrops of the gall bladder, and even abdominal aneurysms have been mistaken for growths limited to the upper urinary tract. Every effort should be made to rule out these conditions whenever renal growths are suspected.

In the kidney itself there are many pathologic conditions that may be erroneously interpreted as pelvic or renal neoplasms. These mistakes in diagnosis are usually based on the interpretation of urograms. I have a fairly large series of cases where the post-operative findings did not agree with the pre-operative diagnosis. A brief review of some of these errors in diagnosis should be helpful. In all of the cases cited the only symptom has been painless hematuria.

In certain cases of unilateral renal hemorrhage one can easily err in the diagnosis. Often it is better, after thorough study, to nephrectomize a hemorrhagic kidney even though the pyelogram is normal or impossible of correct interpretation, than to permit an early cancer to develop into a late one.

Two cases illustrative of this point are interesting. Both patients had [illegible] unilateral bleeding but had [illegible] mal pyelograms. In one case all that could be found was an "acute hemorrhagic papillitis." In the second case, the bleeding kidney looked so normal that I was ashamed to remove it. On gross examination no lesions of any kind could be demonstrated. The papilla of the superior calyx seemed to be a bit more congested than its fellow. Microscopic examination revealed a definite early cancer.

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*Read before the Seventh National Assembly of the International College of Surgeons, Denver, Colorado, July 15-18, 1942.

Bugbee recently advocated opening the kidney in certain cases of painless unilateral hematuria before removing it. In a few cases this might be advantageous and enable us to save all or part of a valuable organ. It would have been of no value in the case of cancer cited above because, grossly, the pelvis and kidney looked normal. I would hesitate to cut into a kidney suspected of harboring a neoplasm through fear of spreading the disease, even though such a fear might be only theoretical.

Two cases of non-opaque calculi have been erroneously diagnosed as tumors of the renal pelvis. One, a simple stone; the other, multiple calculi in the pelvis and lower calyx.

A tuberculous abscess in the lower pole of a kidney, with a large blood clot in the pelvis, was responsible for a diagnosis of a pelvic tumor. There were no symptoms or other clinical or laboratory evidence of tuberculosis. The diagnosis of tumor was also made in two other prominent clinics.

A woman, aged 40, presented herself with a history of painless hematuria. The pyelogram showed a peculiar irregularity of the lower calyx. Tumor was diagnosed. Operation revealed an infarct of the kidney.

A number of years ago, I published a paper on an adenocarcinoma of the head of the pancreas, mistakenly diagnosed as tumor of the lower pole of a movable kidney. Operation and autopsy revealed the true diagnosis. These are errors in diagnosis that have all been personal experiences. Careful study of the pyelograms, when compared with typical deformities caused by actual tumors of the pelvis and parenchyma, will possibly prevent these pre-operative errors in the future. Fortunately, all of these patients, except one, had to be nephrectomized, and while they were all treated as tumor cases, the only definite criticism is that they were treated by X-ray and radium pre-operatively. This delayed the operative procedure, increased the expense to the patient, and cost one good kidney. The single non-opaque calculus could have been removed and the organ saved if it had not been for the preliminary X-ray and radium therapy. Typical pyelograms are never difficult of interpretation.

Other conditions that must be differentiated are single or multiple cysts of the kidney and benign growths. The latter are relatively rare.

There are many methods of treating tumors of the upper urinary tract. Some prefer pre- and post-operative X-ray therapy with surgery, while others prefer different combinations of these procedures. My experience in the treatment of tumors of the upper urinary tract, in spite of surgery plus either pre- or post-operative X-ray therapy or any combination of these, has been very unsatisfactory. Many of these patients have required complete nephro-ureterectomy with partial cystectomy, otherwise recurrences may develop in the ureteral stump or in the bladder following nephrectomy.

Several years ago I did a nephrectomy for a papillary carcinoma of the renal pelvis, and five years later there was a recurrence of the tumor in the ureteral stump and in the bladder. At the time of the original operation it was considered suicidal, because of the patient's condition, to do a complete nephro-ureterectomy with partial cystectomy.

I had already seen a number of similar cases. Secondary ureterectomy with partial cystectomy had always failed because of the extension of the tumor mass to the retroperitoneal tissues, and, in several cases, through the peritoneum itself. The question of treating this involved ureteral stump by X-ray was raised. This treatment had been tried in several cases without satisfactory results. Radium inserted into the ureter was considered, but how to insert it properly was the question. In consultation with M. Cervi, a Physicist, the first catheter loaded with radon for the treatment of this recurrent growth in the ureteral stump was designed. The results were very spectacular. As a result of this experience, it seemed rational to treat the ureter pre-operatively in this manner prior to surgery and thereby obviate the necessity for the very major operative procedure of nephro-ureterectomy with partial cystectomy.

The first catheters used were solid after they had been filled with the radon seeds. The first two or three patients suffered intensely from an acute and painful hydronephrosis for the period of time that the catheter was left in the ureter. Experiments were then made with a two-way catheter. One side was filled with the radon seeds; the other gave adequate drainage from the renal pelvis during the period of radiation.

Of course, it must be remembered that a catheter cannot be passed in all of these cases and then other methods must be used. Since the development of the radon catheter, treatment of tumors of the upper urinary tract has been standardized in our clinic, and while the series of cases treated in this manner is still very small, the results are unquestionably much better than those obtained by any previous combination of therapy.

The radon catheter destroys the lower three-fifths of the ureter and allows the surgeon to do a simple nephrectomy safely instead of a complete nephro-ureterectomy with partial cystectomy. This treatment is particulary indicated in treatment of tumors of the renal pelvis, and in these cases we may also plant a few radon seeds around the affected ureter. In all tumors of the upper urinary tract, including those of the upper ureter, pelvis and parenchyma, X-ray therapy pre-operatively is the routine. This devitalizes tumor tissue in the kidney, blocks the lymphatics and blood vessels, making metastasis less likely as a result of later surgical handling. Very large tumors of the kidney, which are at first considered inoperable, may and often do shrink so that they are easily handled at operation. X-ray therapy has not made surgical removal more difficult, and nephrectomy has been done as long as a year after the diagnosis was first made where the X-ray therapy was prolonged and extensive.

It has been my experience that the Wilm's tumor shrinks very rapidly under X-ray therapy and that operation is made simpler and easier if these tumors get pre-operative radiation. One case that demonstrates this very distinctly was a fourteen-month-old baby with a huge Wilm's tumor of the left kidney. Very minimal doses of X-ray caused the tumor to shrink so rapidly that at operation the kidney, with its tumor, was removed with relative ease. This patient is alive over a year without recurrence and will be the first case in my experience of Wilm's tumors that has been cured, if this case can be considered cured. My limited experience, of course, is not sufficient to take issue with Ladd, who believes that these cases should be operated on and then treated with X-ray.

It must be emphasized, however, that even though treatment of a disease is standardized there are exceptions to every rule. Ordinarily, we do not use post-operative X-ray therapy unless there seems to be a definite indication for it. There are times when the routine treatment of an individual case must be abandoned to more intelligently meet the problem at hand.

The Radium Emanation Corporation takes a double channel catheter with two lumens blended into one. At the distal end there are two drainage eyelets. Radon seeds separated by short lengths of a neutral material are spaced evenly along the portion of the catheter to be activated. These spaces are completely enclosed in platinum. The entire dosage evenly distributed in the necessary mber of seeds, depending upon the ngth of ureter to be irradiated. A seed is placed in the catheter and pushed down into place. A spacer follows, another seed is put in, a spacer follows, etc., until the entire described length of the catheter is loaded. The channel is then plugged at both ends to prevent shifting of the seeds. A roentgenogram is then taken of the activated portion of the catheter to see that radiation distribution is where it is supposed to be. This leaves one lumen free to drain the urine from the renal pelvis on the side to be radiated and prevents any overdistention of the pelvis. The catheter is sufficiently flexible to pass the curves of the cystoscope and to follow the normal course of the ureter. After insertion, a roentgenogram is taken to be sure that the catheter is properly placed and that the radiation is going to be distributed to the proper portion of the ureter. The catheter is left in for 72 hours. The dosage is approximately 400 mc. hours per inch of active length. The primary filter is 0.3 mm. of platinum.

After the catheter has been placed and has been properly checked, the patient is given pre-operative radiation. Three ports are used. The anterior port extends from the midline out over the kidney area from just below the nipple to just below the crest of the ilium. The posterior port extends from about the tenth rib to below the crest of the ilium, from the middle of the spine out to the edge of the abdomen. The middle port is the port between these two and is directed laterally over the kidney. Treatments are given daily to two ports and if a third port is deemed advisable, only two ports are treated daily. The dosage is 200 r, per port per day, each area receiving a total of from 1400 to 1600 r. The operation is performed within two weeks of the completion of the radiation.

Small tumors of the kidney can be approached safely from the back by any of the regular kidney incisions. Whenever nephro-ureterectomy with partial cystectomy is contemplated, two incisions are necessary: One in the lower abdominal quadrant for the partial cystectomy and separation of the lower ureter, and the other in the loin for the removal of the kidney itself. Many surgeons prefer to approach large tumors of the kidney transperitoneally. All of these various operative approaches have their very evident disadvantages.

I would like to emphasize an operative approach and technic which I believe to be superior to any of these, although it must always be remembered that the operative procedure must be selected to fit each individual patient.

If the twelfth rib is resected (the eleventh has been resected several times) the exposure of the kidney is facilitated. The incision is made down on the middle of this rib, the muscles are dissected from the superior and inferior border of the rib, and the rib is then resected. The incision is continued anteriorly for a short distance. The transversalis fascia is opened, the pleura carefully retracted, and the peritoneum is pushed forward and out of the way. Gerota's fascia is nicked and the opening is enlarged by tearing it with the fingers. This method of opening the renal fossa also protects the pleura from injury. However, if the pleura is injured it can be repaired immediately. I have opened the pleura accidentally at least a dozen times, and once deliberately without any untoward difficulty, either at the operating table or during the convalescent period. If the pleura is friable and the sutures pull out, a bit of muscle or fascia may be sutured over the pleural rent.

This incision exposes the upper pole of the kidney, the lines of cleavage are easily established, and even the largest tumor can be delivered with comparative ease. In one case, the eleventh rib was deliberately resected, and as the tumor had firmly attached itself to the diaphragm, this muscle was resected, with obvious injury to the pleura, and the tumor mass was removed. The defects in the pleura and diaphragm were closed and this patient made an uneventful operative recovery. When the wound is closed care must be taken not to open the pleura with the needle as it is passed through the muscle layers where the rib has been removed. Not that it will cause any trouble, but it is better not to open the pleura. The rest of the closure is done routinely.

SUMMARY

1. Careful differential diagnosis is necessary. When in doubt an upper urinary tract lesion should be treated as cancer.

2. Pre-operative X-ray therapy through three ports (anterior, posterior and lateral) is the routine method.

3. Pre-operative irradiation of the ureter with radon in a catheter is the rule whenever a catheter can be passed. This blocks the ureter and makes total removal of the ureter and part of the bladder unnecessary.

4. Nephrectomy within two weeks of the completion of the combined radiation is usually indicated. At times, nephrectomy may be postponed for a much longer period, according to the indications.

5. The rib resection approach to the renal fossæ facilitates removal of the kidney, regardless of its size or complications.

6. Statistics before and after using the above technics can be supplied, but are of little value. Results have been uniformly better since adopting the above routine. The series of cases in any one man's hands is necessarily small, but I believe the results thus far obtained justify the continuance of the technic until something more practical can be found.

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SUMARIO

En el diagnostico diferencial del cancer de las vias urinarias superiores es imperativo el proceder con cautela. En caso de duda es preferible el tratar la lesion renal como si fuera cancerosa. El autor emplea de rutina la rontgenoterapia preoperatoria por las tres vias: anterior, posterior, y lateral. Es de regla la irradiacion preoperatoria del ureter por intermedio de un cateter que contenga radon en todos los casos en sea posible la cateterizacion de ducto. Este proc

ureter y por lo tan o b

reseccion total o de la pared adyacente de la vejiga urinaria. Dentro de las dos semanas que siguen al termino del tratamiento radioterapico es usual el practicar la nefrectomia. La costectomia permite la visualizacion de la fosa renal y facilita la reseccion del rinon, sea cual fuere el tamano de este organo o las complicaciones que existan. En la experiencia del autor, la tecnica arriba mencionada, produce mejores resultados y por lo tanto justifica su opinion de que se debe de usar hasta que se descubra un metodo terapeutico superior.

RÉSUMÉ

Un diagnostic différentiel précis est nécessaire. Duns l'incertitu, traite les lésions des régions urinaires supériéures mme des cancers. La thérapie pré-ératoire radiologique routinière sera ntérieure, postérieure et latérale. Quand un cathèter uréteral chargé de radon peut être introduit, on pratiguera l'irradiation pré-opératoire de l'urétere. Cela bloque l'urétère et rend inutile l'ablation totale de l'urétère et d'une partie de la vessie urinaire. Deux semaines après l'achèvement de la radiation complète on enlèvera la rein. On peut dans certains cas ajourner la néphrectomie. La résection d'une côte facilite l'approche et l'enlèvement du rein. Les résultats sont meilleurs depuis l'emploi de la technique si-dessus mentionnée. Des perfectionnements de technique sont à désirer.

Выводы

Правильный дифференциальный диагноз необходим. Если-же существует сомнение, то следует лечить лезии верхнего мочевого тракта, как будто-бы это рак. До-оперативное облучение Рентгеном через три порта, как правило, обязательно. До-оперативное облучение мочеточника посредством радона в катетере, как правило, если катетер может быть проведен. Это блокирует мочеточник и удаляет необходимость удаления всего мочеточника и части мочевого пузыря. Неффектомия делается, как правило, через две недели после комбинированного облучения. В некоторых случаях возможно отложщть неффектомию на более долгий срок. Разрез с резекцией ребра облегчает подступ к почке даже в присутствии ее большого размера и всевозможных осложенений. Результаты поправились с тех пор как автор придерживается описанного лечения. Число пациентов конечно не может быть большим, но в виду благоприятных результатов придерживается описанной техники, по крайной мере пока не найдется лучший способ.

INTERNATIONAL COLLEGE OF SURGEONS

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Management of Acute Cholecystitis*

Review of 110 Cases Treated from 1937 to 1941

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DESPITE the vast experience of many surgeons in the treatment of acute cholecystitis and its complications, there remains a wide diversity of opinion. Although some surgeons advocate the immediate or emergency operation and others a conservative treatment, we feel that there can be no dogmatic rules to follow, but rather that one utilize his judgment in treating each case individually.

In reviewing 110 cases of acute cholecystitis treated during a five-year period (1937 to 1941), very interesting time relations were found to exist. The average duration of the chronic symptoms referable to the gall bladder persisted for 5.6 years before the onset of the acute illness. The study also revealed that the acute illness had existed 5.2 days before the patient entered the hospital. This figure clearly illustrates the misuse of the term "immediate or early operation," as very few patients with acute cholecystitis enter the hospital within a few hours of the onset of the acute illness. The average period of pre-operative hospital preparation was thirty-seven hours, or one and one-half days. The average period of total hospitalization was seventeen days.

DIAGNOSIS

The successful treatment of an acutely ill patient depends upon the establishment of an accurate diagnosis. Acute cholecystitis generally may be diagnosed by the several subjective and objective symptoms. The patient almost always gives a past history of intolerance to fatty and greasy foods, dyspepsia of varying degree, and not infrequently of previous attacks of colic diagnosed as gall bladder disease. The most common subjective symptom is pain or colic located in the right upper quadrant and referred to the right scapular region. Other common symptoms, such as nausea, vomiting, fever, chills and jaundice are listed in Table I, in the order of their frequency as found in this study. It is interesting to note that gallstones were found in almost every case.

TABLE I.
SYMPTOMS OF ACUTE CHOLECYSTITIS

SYMPTOMS	NO. OF CASES
Pain or colic	110
Gallstones	106
Nausea	102
Vomiting	67
Fever	66
Chills	36
Jaundice	27

In the differential diagnosis t[illegible] three conditi[illegible] to

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linician. These diseases are a per-
ted peptic ulcer, an acute intestinal
ruction and acute coronary throm-
s. Any of these illnesses in an atypi-
orm may simulate acute cholecysti-
nd since it requires careful study to
inate them, there is good reason to
hold immediate operation. The sur-
often sees a patient with acute
ecystitis who complains more of a
d heart than of abdominal discom-
. The palpitation and tachycardia
probably the result of a reflex para-
pathetic nervous stimulation asso-
ed with an acutely distended gall
der. However, where there is any
tion of myocardial or coronary dis-
, an electrocardiogram is obtained.
out X-ray film of the abdomen and
t frequently reveals the presence of
tones, a distended gall bladder and
resence or absence of a pneumoni-

Other diseases to be excluded as
nostic possibilities are gastric crisis,
appendicitis, diverticulitis of the
denum and torsion of the omentum.

urther laboratory data include blood
nts, urine examinations, prothrombin
, Kahn test and estimations of blood
ric indices, sugar, nitrogen and amy-
values. An elevated blood amylase
l indicates pancreatitis and we have
n had levels as high as one thousand
s.

PRE-OPERATIVE PREPARATION

dequate and proper pre-operative
paration of a patient ill with acute
lecystitis is a most important factor
reducing the mortality rate. The
gth of time necessary for the thor-
h preparation depends upon several
ditions: (1) The age and general con-
on of the patient; (2) the severity of
disease; (3) the amount of dehydra-
: (4) the size and consistency of the gall bladder mass, and (5) the presence or absence of icterus.

As soon as a positive diagnosis is made, the patient is relieved of pain by sufficient morphine sedation. Massive hot stupes relieve the abdominal discomfort and the muscle spasm, adding to the comfort of the patient. The administration of intravenous fluids (5 per cent glucose and saline solutions) counteracts the dehydration, establishes a satisfactory fluid balance and reinforces the store of liver glycogen. If the patient is vomiting or shows evidence of abdominal distension, Wangensteen suction is immediately employed. No food is given.

A blood transfusion is indicated in every case of jaundice, in patients suffering from shock and in those having a low blood serum protein. For the past few years we have used sulfathiazole pre- and post-operatively for acute cholecystitis with moderate or severe infections because it reduces the virulence of the infection.

Patients with acute cholecystitis complicated by jaundice receive intensive vitamin K therapy before and after operation. Bile salts are given with the vitamin K orally to promote absorption of it from the intestinal tract. The prothrombin time is used as an indicator of the response of the body to the vitamin K treatment. Large doses of vitamin C or ascorbutic acid are given, as we are convinced that this has greatly improved wound healing and has reduced post-operative complications.

COURSE OF DISEASE

The optimum time for operation depends upon the correlation of several factors. The reduction in the pulse rate indicates a satisfactory response to pre-operative preparation. The change from a dry furred tongue to a moist clean tongue, and an increased feeling of comfort and well-being on the part of the patient are signs of improvement. We feel that a most important sign is muscle spasm and that changes in this are an important guide in evaluating the response of the disease to conservative treatment. Patients who have recurrent attacks of chills almost always have a gangrenous gall bladder, empyema or perforation with peritonitis. The average fever found in reviewing our cases was 101° F. The presence of such complications as hepatitis, cholangeitis, pancreatitis or perforation of the gall bladder frequently results in a fever of 103° F. or higher. An intensely severe constant pain deep in the abdomen may indicate a severe pancreatitis.

The most common complications of acute cholecystitis, as found in our series of cases, is listed in Table II.

TABLE II.

COMPLICATIONS OF ACUTE CHOLECYSTITIS

COMPLICATIONS	NO. OF CASES
Empyema	63
Pancreatitis	41
Hepatitis	40
Gangrene	40
Perforation with peritonitis	20

SURGICAL TREATMENT

The ultimate cure of the patient depends upon surgical intervention and the removal of the calculi. One must not forget that the disease is the direct result of the gallstones in nearly all cases, and that complete relief can almost surely be obtained by removal of these calculi alone. The type of operation depends upon the exper[illegible] the surgeon. It is [illegible] demic surgery in treating acute cholecystitis.

There are three very important conditions which must be considered in the safe treatment of such a patient:

(A) The age and general condition of the patient are of paramount importance. [illegible] patients i[illegible] of of life withstand biliary infection poorly, and an early short operation is often life-saving. The average age of the patients in our series was fifty-four years, the oldest being eighty-one years and the youngest four years.

(B) The severity of the disease limits the length of the operating time and the type of anesthetic agent employed. No standard operative technic is applicable to all cases. During the past fifteen years we have found spinal anesthesia to be the most satisfactory anesthetic. Acutely ill patients tolerate inhalation anesthetics very poorly. Intravenous sodium pentothal and local infiltration of novocaine, or a combination of these, are much safer for an elderly debilitated patient. The supplementation of regional anesthesia with oxygen prevents anoxia.

(C) The pathology of the biliary tract and adjacent organs plays an important part in the choice of an operative procedure. Pathologic conditions most frequently encountered are: (1) Free intra-abdominal fluid; (2) edema of the tissues; (3) a distended gall bladder; (4) cholangeitis; (5) hepatitis; (6) pancreatitis; and (7) calculi which may lie in the fundus of the gall bladder, cystic duct, common duct or the hepatic ducts.

The most common type of operation is the cholecystectomy with removal of the gall bladder as well as the gallstones. There are two variations of this operative procedure: (1) The complete ligation of the cystic duct, which is done when the remaining biliary tract is essentially normal; and (2) draining the cystic duct by the insertion of a rubber tube, which allows the decompression of the entire biliary tract in the presence of cholangeitis and [illegible] or [illegible] of the duct[illegible]

TABLE III.

OPERATIVE TECHNICS IN ACUTE CHOLECYSTITIS

TYPE OF OPERATION	CASES	DEATHS	MORTALITIES %
Cholecystostomy	32	3	9.3
Cholecystostomy with drainage of common duct	1	0	0.0
Cholecystectomy with soft rubber drainage	27	0	0.0
Cholecystectomy with drainage of cystic duct	39	1	2.5
Cholecystectomy with choledochotomy	30	0	0.0
Cholecystectomy with drainage of the common duct	11	0	0.0
TOTAL	110	4	3.6

The simplest and quickest operation which will give relief is a cholecystostomy with removal of the calculi. However, if the condition of the individual does not permit the safe removal of an embedded gallstone in the cystic duct, the gall bladder is packed with an antiseptic gauze. When the pack is removed in ten days the calculus is often dis-ged and may be easily lifted from the l bladder with a long forceps.

Choledochotomy, with or without drainage, is an operative technic which is receiving more consideration during the past few years. This procedure is indicated in every case of clinical jaundice, and we feel that it should be carried out in the presence of an elevated icteric index with subclinical jaundice. Drainage of the common duct by a "T" tube is indicated if gallstones are found in the common or hepatic ducts, if the common duct is dilated, if there is marked evidence of cholangeitis or if there is an acute pancreatitis.

The operative procedures which have been employed by us in the treatment of acute cholecystitis during the past five-year period (1937 to 1941) and the end-results are shown in Table III and in the graph.

POST-OPERATIVE CARE

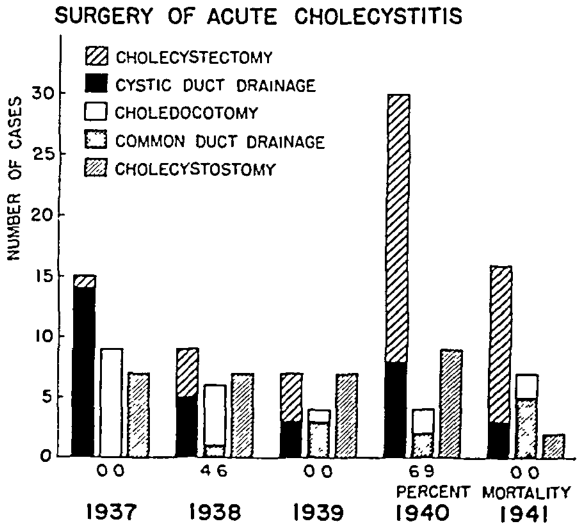
The post-operative care of a patient with acute cholecystitis and its complications requires careful and constant observation (Graph I). Orders which play an important rôle in the rapid and successful recovery of an acutely ill patient are listed as follows:

1. Adequate morphine sedation is of prime importance.

2. *Intravenous administration of* 5 per cent glucose and saline solutions maintains the correct fluid balance.

3. Sulfathiazole chemotherapy is ordered in doses as indicated by the severity of the infection.

4. Vitamin C is administered in adequate doses of 500 to 1,000 mgm. daily to promote rapid wound healing.



5. Vitamin K is administered in the presence of icterus.

6. The patient is placed on a progressive diet leading to a high protein, low carbohydrate and low fat diet.

7. Blood transfusions are indicated in every case of jaundice, in patients suffering from shock and in those having a low serum protein value.

8. Patients suffering from shock, hyperpyrexia and acute pancreatitis always receive oxygen by the tent method.

9. Vomiting and abdominal distension are treated immediately by the Wangensteen suction.

10. The patient is encouraged to change positions freely and to take deep breathing exercises to prevent post-operative pulmonary complications.

The prophylaxis of post-operative complications is extremely important and difficult. In Table IV are listed the types of post-operative complications encountered in our series of cases.

TABLE IV.
POST-OPERATIVE COMPLICATIONS OF ACUTE CHOLECYSTITIS

TYPE OF COMPLICATION	CASES	DEATHS	MORTALITIES %
Pneumonia	15	1	6.6
Cardiac	12	1	8.3
Atelectasis	11	1	9.0
Wound Infection	3	0	0.0
Thrombophlebitis	1	0	0.0

SUMMARY

The successful treatment of acute cholecystitis and its complications requires much experience and mature judgment on the part of the surgeon.

The treatment of a patient with acute cholecystitis must be individualized. In a review of 110 cases of acute cholecystitis, the average period of pre-operative preparation was found to be thirty-seven hours.

In this series the average duration of the acute illness before hospitalization was found to be 5.2 days.

The most important post-operative complications of acute cholecystitis are pneumonia, atelectasis and cardiovascular disease.

The mortality rate for the 110 cases of acute cholecystitis was 3.6 per cent. The causes of the four deaths were pneumonia, coronary thrombosis, pulmonary embolism and generalized peritonitis with atelectasis.

SUMARIO

El exito del tratamiento de las colecistitis agudas y de las complicaciones que presentan depende en gran parte de la experiencia del cirujano. El tratamiento de esta clase de pacientes siempre debe de ser individualizado. El estudio de 110 casos de colecistitis aguda revelo que el periodo de preparacion preoperatorio fue por termino medio de 36 horas, existiendo en general un lapso de 5.2 dias entre el comienzo de la enfermedad y el del periodo de la hospitalizacion. Las complicaciones de mayor importancia en las colecistitis agudas son: la pulmonia, la atelectasia y las crisis cardio-vasculares. En esta serie de 110 casos la mortalidad fue de 3.6 por ciento. La causa de la muerte en los cuatro casos que terminaron fatalmente se debio a la pulmonia, la trombosis de la arteria coronaria, al embolismo pulmonar y a la peritonitis general con atelectasia.

RÉSUMÉ

Pour traiter avec succès la cholécystite aiguë et ses complications, et importe que le chirurgien soit experimenté, habile et bien réfléchi. Les mesures à prendre doivent être appropriées à chaque malade. Dans 110 cas de cholécystite aiguë, la moyenne de la durée de ration pré-op[illegible] [illegible]

ente-six heures. Les complications
ost-opératoire de la cholécystite aiguë
nt la pneumonie, l'affaissement pulmo-
aire (atelactase) et les troubles cardio-
asculaires. Dans ces 110 cas, lu morta-
té, fut de 3.6 pour cent. Il y eut quatre
ecès, un cas de pneumonie, un de throm-
ose coronaire, un d'embole pulmonaire
un de péritonite genéralisée compli-
uée d'atélectase.

Выводы

Удачное лечение острого холецистита и
о осложнений требует много опыта со
стороны хирурга. Лечение нацие
страдающего острым холециститом ну
индивидуализировать. Предоперативн
период в 110 случаях острого холецист
равнялся в среднем числе тридцати-с
часам. Длительность острой болезни
госпитализации равнялась в среднем
дням. Пневмония, ателектаз и сердеч
сосудочныя заболевания были главны
осложениями после операций. Сме
ность в этой группе 110 случаев рав
лась 3.6 процентов. Причинами смерт
четырех случаях были: пневмония, ко
нарной тромбоз, легочная эмболпя,
разлитый перимонит с легочным ател
тазом.

RESERVATIONS

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Address this office for information regarding technical and scientific exhibit space.

Treatment of Pelvic Dystocia in Cuba[*]

Summary of Results in the Municipal Maternity in the Last Four Years (1934-37)

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IN THE latter part of the last century, Pinard and his followers laid down foundations for a new treatment of pelvic dystocia, discarding the forceful interventions and interruptions of pregnancy, advising instead, according to each case, either hysterotomy or the removal of the obstacle by symphysiotomy. Professor Eusebio Hernandez attended at that time the Baudelocque Clinic in Paris and took active part in the revolution that changed the obstetric procedures of that epoch.

Upon his return to Cuba, he brought with him these new principles, and practiced symphysiotomy not only at the University but in his private practice as well. His chair in the lecture room was always a focus of dissemination among the numerous groups of his pupils describing new methods of solving difficulties of labor due to pelvic disproportions.

Symphysiotomy was practiced in Cuba until 1923 by the so-called "open method" of Farabeuf, but from that year on, due to our efforts, the subcutaneous method began to be used. We have, therefore, nearly fifteen years of experience in the practice of subcutaneous symphysiotomies, and at this time, this is the only type of pelviotomy practiced in Cuba. Regarding cesarean section, from the beginning limited among us to the cases of extreme pelvic defects, we may say that it was very rarely performed because the only method used was the classic cesarean section on the body of the uterus. Lately, the introduction of the transperitoneal cesarean section on the segment, and its diversified technics, especially that of Marruz and Vilalta (peritoneal isolation), has enlarged the field of indications for hysterotomy when the syndrome of cephalopelvic defect is present, thereby benefitting the cases presenting extreme degrees of narrowing complicated by infection of the uterine contents.

THE ATTITUDE OF THE CUBAN SCHOOL REGARDING PELVIC DYSTOCIA

This attitude rests on three premises: (a) Cephalopelvic insufficiency; (b) infrequency in Cuba of extreme pelvic defects, and (c) results obtained by subcutaneous symphysiotomy.

(a) Cephalopelvic Insufficiency.—We follow the physiologic aspects of the problem now accepted by all, but this was not true when our teacher Hernandez proclaimed that "it is easier for a soft and reducible head to go through a narrow pelvis than for a hard and bony one through a pelvis of normal dimensions."

We frequently note how spontaneous delivery takes place through a pelvis of light or moderate deficiency, with a live fetus at term, while, on the other hand, in many cases where the pelvis is normal in its development and capacity, we may have a true picture of pelvic dystocia if the fetal head is large and irreducible or falls into a defective presentation (forehead, sinciput).

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[*] Translated by T. Seydel Vaca, M.D., Philadelphia, Pa.

(*Translator's Note:* The printed pamphlet from which this translation was made shows exactly the numbers and percentages herein reported. There seems to be a slight discrepancy in the percentages as we figure them and also with the figures of the author at the beginning of this chapter. However, we do not feel this is important enough to make any changes.)

Therefore, it is almost impossible to foretell the course of labor in light or moderate degrees of pelvic narrowness. In these cases it is necessary to wait for the several factors of uterine contractility, rupture of the membranes, and time elapsed to enter into play against the volume of the head and the pelvic capacity, in order to measure the possibilities of a normal evolution of labor or its impossibility, giving rise to what we have functionally classified as the cephalopelvic insufficiency syndrome.

(b) Infrequency in Cuba of Extreme Pelvic Defects.—Taking into account the course we must follow before these fects, Hernandez divided the several es of pelves into those requiring cearean section and those calling for symphysiotomy. He recommended cesarean section (giving up all hope of transpelvic delivery) when the pelvis was flat, with a useful diameter of 8 cm. or less, or when it was of the channel type of less than 9 cm. The others, except, of course, those presenting a typical narrowness of large degree, he considered as proper subjects for symphysiotomy.

At the present moment we follow the same classification, but with a tendency to be a little more liberal in the use of cesarean section if there are other factors, such as lack of elasticity of the soft parts, or a frankly over-lapping anterior parietal with a large fetus in a pelvis of 8 to 8½ cm. in diameter.

Following these principles in the circumstances above detailed, our statistics show a total of 192 symphysiotomies against 26 cesarean sections in the same period in the treatment of pelvic dystocia. This fact in itself is enough to demonstrate that in the matter of pelvic defects in Cuba, the predominant type is one of slight narrowness, with a good sacral curvature and a good diameter well above 8 cm., not taking into account that in at least one-third of the cases, symphysiotomy is practiced in pelves of normal shape and dimensions, but in which the cephalopelvic syndrome is due to fetal factors that will produce the same clinical picture and conditions of a skeletal defect.

It will be easily understood, therefore, that extreme pelvic defects in Cuba being rare, we have practiced only 26 cesarean sections in the same lapse of time in which we have performed 192 symphysiotomies, not counting, of course, cases in which labor went through to a spontaneous termination. This is only one of the many points that characterize our attitude regarding the treatment of this kind of dystocia, because in the type of pelvis calling for cesarean section there is nothing to be hoped for regarding labor through the pelvis, and all attempts at delivery will have a disastrous termination. It is unnecessary, therefore, to wait for signs of difficulty, as labor could not be completed and would serve only to aggravate the maternal danger in the hysterotomy that would necessarily have to follow.

Our cases of cesarean—diagnosed pelves, therefore, are allowed to enter into labor and to advance a few hours, only with the purpose of intervening at the proper time upon the lower segment while enlarged, but never with the intention of allowing the full development of all the factors that may impede or facilitate the intrapelvic progress of the fetus.

To wait for evidence of sufficient progress (and in order to be acceptable evidence it must be carried far enough) is permissible only in cases of pelves sellective for symphysiotomy, where delivery by the normal route seems possible and where we may not be faced later on by the necessity of having to perform a cesarean section on a patient who has been laboring for days or many hours after rupture of the membranes.

If we take into account that spontaneous labor takes place at least in 50 per cent of the cases where narrowness of the pelvis is slight or moderate, that is, not less than 8 cm. in diameter, under favorable circumstances of uterine contraction, etc., due to judicious waiting, it will be understood why the proportion of our interventions for this type of dystocia is so small, amounting only to 1.25 per cent for both cesarean sections and symphysiotomies combined, which are the only interventions practiced. On the other hand, in maternity cases in which the enlargement of the pelvis by surgical means is not practiced, the number of cesarean sections in the treatment of pelvic defects is always more than 2 per cent. Furthermore, in spite of all that has been said before, physicians continue to employ forceps and even version to solve problems created by bone defects that come into evidence only after long hours of labor and rupture of the membranes, when any surgical measure by the abdominal route is risky for the mother.

(c) Results Obtained by Subcutaneous Symphysiotomy.—The possibility of increasing (without any maternal risk) the capacity of the pelvic girdle, even if it is only by a few millimeters, is undoubtedly a great forward step in obstetric surgery. It is even more important in countries like ours where, because of special conditions of race, climate and diet, the syndrome of cephalopelvic insufficiency takes place eight times out of nine in pelves showing only a very light degree of narrowness or are completely normal from the standpoint of shape and dimensions. We believe this to be one of the reasons for the results obtained by the Cuban School.

The fact that we often confront cases in which the disproportion is relative, and occasionaly septic uterine contents are present, has compelled us to study and apply all the means that may be required for the solution of these problems, by way of the pelvis instead of by abdominal surgical intervention.

When confronting pelves requiring symphysiotomy, that is, those having a slight or moderate narrowness and presenting relative disproportion, our attitude is "watchful waiting and eventually removal of the obstacle by symphysiotomy."

Following this method, we devote much time and attention to each case, and we need, through the natural evolution of labor, to study and estimate correctly all the elements that bring it about, following each stage, and regulating the uterine force, studying the progress or lack of dilatation and engagement, avoiding as far as possible sepsis and maternal exhaustion or regulating the course of events so as to prevent fetal injury, in order to arrive at a spontaneous labor after a reasonable expectation. This is done in case we should be compelled to enlarge the pelvis to accomplish delivery under the best circumstances, that is, with a functionally capable uterus, with little injury to the mother and the fetus and everything else in good condition, from the standpoint of sepsis.

Once the pelvic enlargement is accomplished, we continue observing and directing as may be needed, the evolution of labor momentarily stopped by the pelvic obstacle, which symphysiotomy has already eliminated; very often we have to wait until dilatation is complete and presentation has been properly accomplished through the several stag of its mechanism, arriving finally at a successful delivery. We may find, more rarely, that we must terminate labor by forceps, once the head is resting upon the perineal floor. For this reason we believe that in order to practice symphysiotomy with success, we must have careful obstetric training.

The most comprehensive surgical training that modern obstetrics requires of those who practice it, should not be acquired at the expense of purely obstetric principles, as it seems to us happens in some clinics abroad.

In our recent travels, we have observed that there are schools where the enthusiasm for brilliant abdominal technics has relegated to a secondary place the study and appraisal of the purely obstetric resources, leading their followers to surgical solutions of certain problems that with little more devotion and better reasoning might have been lved otherwise, perhaps in a more odest way, but with better results. In his connection, only a few weeks ago, we heard Professor Couvelaire complain of the mediocre results at present obtained from the different technics of cesarean section in cases in which the ordinary conditions of a few hours of labor, recently ruptured membranes, etc., were lacking, and we have heard him advise that cesarean section should not be converted into the "cream puff" of obstetrics.

However, the purely obstetric course is difficult to follow through long hours, perhaps nights, of waiting and careful study of the phenomena of pregnancy and labor. Besides, obstetric practice frequently requires unlimited time which, in the complex life of our big cities, is not at the disposal of the obstetrician, and rapid solutions must be found. These circumstances are perhaps the worst enemies of symphysiotomy at present.

We feel, therefore, very well satisfied with the results obtained in our work, upon which the present report is based and justified.

TABLE I.—RESULTS OF THE TREATMENT OF PELVIC DYSTOCIA IN THE MUNICIPAL MATERNITY OF CUBA (1934-37)

Labors	16,775	
Symphysiotomies	192	(1.1%)
Cesarean Sections	26	(0.15%)
Total Interventions	218	(1.25%)
Cesarean Sections	26	
Maternal Mortality	0	
Gross Fetal Mortality	2	
True Fetal Mortality	0	
Technics Employed		
Classic	6	
Transperitoneal upon the segment	15	
Marruz-Vilalta	5	

All the cases in which cesarean section was performed were dismissed in perfect condition in thirty days or less, with the exception of three that remained longer on account of suppuration of the abdominal wound which eventually healed normally in all of them. No other maternal complications occurred in the post-operative course of our hysterotomies.

There were two fetal deaths. The first patient, in a former delivery treated by symphysiotomy, had yielded a dead fetus and again, after cesarean section (Marruz-Vilalta technic), was delivered of a dead fetus, which probably was the case before intervention. In the other patient the fetus died from congenital anomalies incompatible with life.

TABLE II.—SYMPHYSIOTOMIES IN 16,699 DELIVERIES

Symphysiotomies	192	(1.1%)
Maternal mortality	3	
Maternal morbidity	3	
Gross fetal mortality	19	(9.9%)
Fetal mortality	10	(5.1%)

CASE REPORTS

Maternal Mortality.—Case No. 28224. Multipara. Dilatation of about the size of the palm of the hand. Symphysiotomy. Local anesthesia with percaine. Live fetus expelled 15 minutes later. A few minutes after delivery the patient became unconscious and died. Autopsy revealed acute dilatation of the heart.

Case No. 32496. Primipara. Entered hospital after considerable intervention outside, with dilatation of about the size of a silver dollar; membranes sound. Symphysiotomy performed, with complete dilatation. There was a bad odor from the amniotic fluid and an hour later a live fetus was expelled. Great fetidness. Normal delivery. Repair of episiotomy. Left delivery room with temperature of 39.15° C. and pulse rate of 140. Death resulted from puerperal septicemia twenty days later. No localization in the symphysis or genital tract could be discovered.

Case No. 32719. Primipara. Entered with
dilatation the size of half a dollar. Healthy
embranes ruptured during examination.
omplete dilatation twelve hours later. Am-
iotic liquid fetid and contaminated with
econium. Symphysiotomy performed. Live
us expelled one hour later. Normal deliv-
. Episiotomy repaired. Twenty-four hours
er rupture of membranes temperature rose
39° C. and pulse rate to 110. The next
the temperature was 41° C., pulse rate
Patient died on the 13th day from puer-
septicemia. No localized infection.

ternal Morbidity.—Case No. 13662. One
us labor with the use of forceps; dead
Second labor, symphsiotomy with com-
ilatation. Application of forceps five
later with easy extraction of a live
Tear of the anterior commissure. In-
ce of urine. Phlebitis followed. Pa-
missed four months later with child,
ring from incontinence.

No. 29613. Primipara. Symphysi-
rformed with dilatation of about
f the palm of the hand. Live fetus
ne hour later. Interpubic suppura-
ssed completely recovered on the

13. Multipara. Complete dilata-
ysiotomy performed, with expul-
etus a few moments later. Inter-

pubic abscess; healed later. Dismissed in good condition on the 40th day.

Symphysiotomies with Fetal Mortality.—Case No. 11513. Primipara. Twenty-three years old. Forceps applied at home. Entered hospital and symphysiotomy performed with complete dilatation. One-half hour later expelled dead fetus.

Case No. 11991. One previous labor with dead fetus. Symphysiotomy with complete dilatation. A few minutes later fetus expelled but could not be revived. Shortly before delivery, fetal heart sounds appeared normal. No Wassermann.

Case No. 13053. Primipara. Complete dilatation. Symphysiotomy performed. Two hours later, forceps applied and withdrawn when internal rotation was accomplished; then the head returned to the transverse position. New application of forceps to rotate head. Four hours later, and seven hours after symphysiotomy, a dead fetus was expelled by abdominal manipulation.

Case No. 14500. Multipara. Three previous easy labors with dead fetuses. Two abortions. No living offspring. Symphysiotomy performed with complete dilatation. A fetus was expelled one and one-haf hours later suffering from respiratory difficulty and died.

Case No. 14766. Primipara; thirty years old. Dilatation about the size of the palm of the hand after fourteen hours; symphysiotomy. Signs of danger to fetus prompted extraction by Delestre forceps. Dead fetus.

Case No. 17036. Primipara. Dilatation about the size of a silver dollar. Thirty nine hours of labor. Symphysiotomy performed. Expulsion of dead fetus one hour later.

Case No. 19011. Primipara. Sixty-one hours of labor. Dilatation about the size of a silver dollar. Rupture of the membranes in early stage. Extraction, ten and one-half hours later, by Delestre forceps, of nearly asphyxiated fetus that could not be revived.

Case No. 20330. Multipara. Brow presentation. Thirty-two hours of labor. Complete dilatation. Symphysiotomy performed. Expulsion, fifteen minutes later, of a dead fetus.

Case No. 20392. Twenty-seven hours of labor. Complete dilatation. Symphysio performed. Expulsion, thirty minutes later, of a dead fetus.

Case No. 21215. Primipara. Forceps applied at home. Symphysiotomy at hospital. Delivery five minutes later. Living fetus, died six days later from intracranial hemorrhage.

Case No. 21456. Primipara. Prolapse of the cord which did not pulsate. Complete dilatation and symphysiotomy. Expulsion, one-half hour later, of a dead fetus.

Case No. 23593. Primipara. Symphysiotomy and expulsion of dead fetus. Clinical history incomplete.

Case No. 25017. Primipara. Complete dilatation. Six hours later dead fetus extracted by Delestre forceps.

Case No. 26942. Primipara. Breech presentation. Symphysiotomy with dilatation smaller than the palm of the hand. Dead fetus.

Case No. 27969. Primipara. Breech presentation; delivery of body; head impacted at superior strait. Walcher position; Champetier de Ribes maneuver; both failed. Symphysiotomy performed. Dead fetus.

Case No. 32311. Primipara. Dilatation of about the size of a silver dollar. Amniotic infection. Symphysiotomy followed by expulsion, eighteen hours later, of a dead fetus. Wassermann 3+.

Case No. 30071. Primipara. Complete dilatation. Symphysiotomy, and one hour later expulsion of a dead fetus (total duration of labor 48 hours).

As may be seen, the three cases that mar our record of maternal mortality cannot be ascribed to pelvic enlargement by symphysiotomy, which brought about a normal evolution of labor. Case No. 28224 was a sudden death, and autopsy revealed acute dilatation of the heart. In the other two cases (No. 32496 and No. 32719), intrapartum sepsis became general and caused death of the patients. No lesions were found in the pelves or genital organs.

There are, therefore, cases in which death has occurred after symphysiotomy, but in no way can the latter be blamed.

Regarding the morbidity of our symphysiotomies, Case No. 13662 presented a communicating anterior tear produced by the forceps. We insist, where it is necessary to employ forceps after symphysiotomy, that episiotomy must be performed before the introduction of the first blade. The fulfillment of this requirement, and a careful extraction, are complete guarantees against communicating tears in the few instances in which the forceps is used after symphysiotomy. This is the only case in our series.

With respect to fetal mortality, there are some cases in which we can justly assert that there could not have been greater success with any other kind of treatment. Cases 11513, 21215 and 27969 were subjected to forceful interventions before pelvic enlargement was accomplished. The first two, by the application of forceps at their homes, and in the last one symphysiotomy was performed after failure of several attempts to release the head from the superior strait by the Champetier technic, aided by the position of Walcher.

Case No. 32311 showed a positive Wassermann. Case No. 13053, evidently complicated by dystocia of muscular origin, required two applications of the forceps, rather timorously performed, without accomplishing the extraction of the fetus which was expelled hours later by expression through the abdominal walls. This case was not properly attended.

Case No. 14500 presented a history of three dead fetuses after easy labors. Not one child living. This is probably a case of active Lues.

Case No. 14766, after fourteen hours of waiting, with dilatation about the size of the palm of the hand, and after evidence of intense fetal suffering, extraction was performed at once.

Case No. 19011, sixty-one hours of labor ended by extraction with forceps ten and one-half hours after symphysiotomy.

Case No. 21456 was that of pelvic dystocia complicated by prolapse of the cord, which did not pulsate.

These cases of fetal mortality have nothing to do with the enlargement of the pelvis by symphysiotomy and must, therefore, in our opinion, be discarded.

TABLE III.—MORTALITY FOLLOWING SYMPHYSIOTOMY

Symphysiotomies	192	
Primiparæ	174	(70%)
Fetal Mortality	7	(5.2%)

Forceps were applied after symphysiotomy in 9 out of 178 vertex and 8 brow presentations (4.8 per cent).

There was spontaneous termination after symphysiotomy (discarding 6 breech presentations) in 177, or 95 per cent. In 182 cases, or 90 per cent, delivery was accomplished within three hours after symphysiotomy. Ninety per cent of the cases of symphysiotomy were dismissed in perfect condition within the following thirty days.

TECHNIC OF SUBCUTANEOUS SYMPHYSIOTOMY

Tincture of iodine is applied to the well-shaved pubic region. A general anesthetic of nitrous oxide is given. A soft catheter is then introduced into the bladder (Marruz-Vilalta), to empty it and permit palpation and deviation of the urethra during the operation.

Two assistants support the thighs in obstetric position. With the middle and index fingers of the left hand introduced *into the vagina, the urethra is pushed to* one side and the superior border of the symphysis is located. With the point of a straight knife in the right hand, cutting edge downward, the skin and cellular tissue are punctured at the level of the *mid-symphysis, pushing until it strikes the bone or the articulation;* without losing contact with it, the blade of the knife is pushed upwards, always with the cutting edge downward, until it reaches the highest point of the articulation, when it is pushed into it with slight lateral movements. The ordinary knife is then withdrawn, and through the same opening a blunt point knife is introduced, directing it toward the middle of the articulation, carrying it upwards without losing contact with the symphysis until it falls into the small groove that has been prepared by the sharp knife upon the highest point of the articulation. At this stage it is at times difficult to follow exactly the path prepared by the first knife, but since we are using *a knife, the point of which is not button*-like but simply blunt, we can separate the tissues and open the way until we place it directly upon the symphysis.

We begin now the downward cut. Sometimes it is difficult to find the interarticular line and a few trials are necessary. There are other cases in which the symphysis is so hard and resistant that it seems as though we were cutting the true bone. During the cutting operation, we have a sensation, as Cathala has said, like cutting through a granular substance. While the blade cuts downward, the handle of the knife goes up, and at the end of the operation it is almost resting upon the abdominal surface. *The fingers in the vagina follow* the blunt point of the instrument in its descent, directing the attack upon the ligament (arcuatum) and at the same time we can appreciate the amount of separation obtained while the assistants *supporting the thighs* [illegible] he [illegible] grad ual and slow flexion and abduction to increase it to the required width under the surgeon's direction.

Very frequently it happens that after cutting the arcuatum no appreciable separation is obtained; in these cases it is necessary to withdraw the knife, and turn its sharp edge upwards, to cut again the remaining fibres of the superior ligament. Again, at other times, the knife has failed to cut the posterior ligament upon which we now turn in order to obtain the required separation. Lastly, we cut all the ligaments that are necessary to obtain (helped by flexion and abduction of the thighs) the required separation, that is, about two fingers' breadth (exceptionally, we may need three fingers' breadth).

If there is any loss of blood through the small skin incision it can easily be stopped by compression from inside or outside, or both, avoiding thereby the formation of a hematoma, which is a very rare occurrence in our practice.

At the termination of labor a metal clip is placed on the skin wound.

POST-OPERATIVE PROCEDURE

Once the pelvic sufficiency is obtained, general anesthesia is stopped and all attention devoted to the evolution of labor which can now proceed after the bone obstacle has been removed. If at the time of intervention there was complete dilatation, very soon the uterine contractions will bring about internal rotation of the head now pressing against the musculo-aponeurotic layers that constitute the perineal floor. If, on the other hand, after symphysiotomy is performed, the cervical dilatation is not complete, it is necessary to wait for a while until the presenting part, after removal of the obstacle, may act as a factor in bringing about dilatation. Symphysiotomy before complete dilatation is extremely interesting. If the membranes have ruptured prematurely and the presenting part in its descent is detained at the upper part of the pelvic cavity, there being no pressing agent, dilatation will cease. In our practice, we have noted time and again that the mechanism of the effacement of the cervix, as well as the dilatation of the os, will occur automatically under the action of the longitudinal muscular fibres of the uterus, but only to the size of about a silver dollar (4 cm.). From there on, there is need, besides, of the action of what Varnier called the "dilator cone," represented by the bag of waters, or in default of this, by the presenting part.

We have observed frequently, when the membranes rupture prematurely, that the presenting part remains high and ceases to progress because of cephalopelvic insufficiency when dilatation reaches 3 or 4 cm., and thereafter remains stationary no matter how good the muscular contractions of the uterus may be. If time is allowed to elapse in these circumstances, we will find also that by pressure above and circulatory stasis at the level of the external os, edema develops in these parts which, soft in the beginning, may become so hard later on by interstitial hemorrhages at this level, as to cause the well known rigidity of infiltration, which has been lately studied in detail by Cathala and in the etiology of which, as claimed by Wallich, though in a minor degree, sepsis plays a part.

Symphysiotomy in these cases stops compression of the upper part of the cervix between the head and the pelvis, alleviating thereby circulatory stasis and its aftermath, edema, allowing the descent of the presenting part to exert its dilator action and improving the mechanism of uterine contractions by renewing the stimulus caused by cervical excitation. We must not forget that pelvic dystocia is frequently the mother of uterine dystocia, either entirely cervical from edema produced by pressure and circulatory stasis, or else by causing anomalies in the contractions of the uterus due to the prolongation of labor and the lack of an exciting agent in the cervix.

Once the pelvic obstacle has been removed we must let labor continue its natural evolution, just as in cases in which there has been no enlargement of the pelvis, and wait for the end of the period of dilatation, keeping an eye on the expulsive period later on. At this moment, it behooves the obstetrician to exert great care to avoid vestibular or anterior tears, which may happen as a serious complication of pelvic enlargement, but which are, nevertheless, certainly avoidable if we take the precaution of, first, performing a good episiotomy when the perineum begins to bulge, and second, to join both knees of the patient with the thighs vertically placed at the moment of expulsion or extraction of the child.

If we have to employ forceps, episiotomy must be performed before the introduction of the first blade.

In multiparae of many labors and in patients who have suffered extensive tears, badly healed, episiotomy is unnecessary because the perineum is extraordinarily enlarged and does not oppose the delivery of the fetus; but in primiparae and, in general, in all patients who present a normal perineum (especially if there is increased resistance) it is absolutely necessary that the enlargement of the bony girdle of the pelvis be followed also by an enlargement of the soft tissues through episiotomy in order to avoid tears in the direction in which the bone support is missing.

As may be seen, the procedure to be followed after symphysiotomy differs very little from the course required by normal labor where intervention has not taken place. We must add, in confirmation of what Hernandez stated, that we have observed in the majority of instances, a complete accomplishment of internal rotation, except in those cases of large multiparae or very extensive episiotomies when delivery has taken place in one of the anterior oblique positions.

Following a small dressing upon the skin wound, the patient is placed in bed and given the ordinary after-labor care.

If there is great pain in the sacro-iliac joints, it may be relieved by the use of a belt, or, better still, by folded sheets placed so as to give support to the hips.

The patients we have operated on move in bed from the first few days and lift themselves often in order to have the hip wedges adjusted.

The length of the period in bed depends upon the cicatrization of the perineum and also upon the improvement of the sacro-iliac pain. The latter, in some cases, is persistent and may compel the patient to stay in bed for three or four weeks after intervention, during which time we try, nevertheless, to have the patient move her legs.

Some of the patients operated on walk with some difficulty at the beginning, but in a few days this trouble disappears.

SUMMARY

Pelvic dystocia in Cuba takes place eight out of nine times in pelves selective for symphysiotomies. The procedure is cesarean section, when indicated; otherwise symphysiotomy is performed in all other cases. Very satisfactory results are obtained from this course of treatment. Forceps and version are not resorted to in Cuba in the treatment of pelvic dystocia. Our technic of subcutaneous symphysiotomy fills all the requirements of safety and simplicity desirable for this ki [illegible] tion.

The clinics that do not practice pelvic enlargement are compelled to increase the number of their cesarean sections, operating on many cases which otherwise would have progressed to a spontaneous solution. They, therefore, cannot avoid many forceful interventions (forceps, version, craniotomy).

SUMARIO

En Cuba las distocias oseas se presentan, en ocho de nueve casos, en pelvices que responden a la sinfisiotomia. La operacion cesarea se practica solamente en los casos que es indicada; de lo contrario, se usa la sinfisiotomia. Los resultados con esta norma de tratamiento han sido muy satisfactorios. En Cuba no se usa el forceps ni la version en el tratamiento de las distocias oseas. Nuestra tecnica operatoria de sinfisiotomia subcutanea llena todos los requisitos de simplicidad y seguridad seables enesta clase de intervencion rurgica. Las clinicas que no practin el ensanchamiento de la pelvis cuando lo es indicado se ven obligadas por necesidad a recurrir a la operacion cesarea o las intervenciones (forceps y version) cuyo corolario con frecuencia es la basiotripsia.

RÉSUMÉ

La dystocie pelvique à Cuba a lieu dans huit de neuf cas choisis pour symphysiotomie. Quand l'indication, existe, la section césarienne est l'opération de choix; dans tous les autres cas, on aura recours à la symphysiotomie. Cette conduite nous a obtenu des résultats trés satisfaisants. A Cuba on n'a pas dans les cas de dystocie pelvique, recours aux forceps on à la version. Notre technique de symphysiotomie sous-cutanée offre tous les desiderata de sûreté et de simplicité. Les cliniques qui ne pratiquent pas l'agrandissement du pelvis forcément augmentent le nombre de leurs sections ovariennes, opérant ainsi dans beaucoup de cas qui terminerarent spontanément et aussi ont bien souvent recours à des interventions forcées (forceps, version et à leur frequent corollaire—basiotripsy.

Выводы

В Кубе тяжелые роды по причине таза происходят восем раз из девяти случаев избранной симфизиотомии. Здесь правильная процедура при показаниях это кесарское сечение, иначе делается симфизитомия. Этот метод дает весьма удовлетворительные результаты. Щипцы и версия не употребляются. Наша техника отвечает всем требованиям несложной и безопасной операции. Клиники, в которых не практикуют увеличение размеров таза, обязанны увеличивать число кесаровских лечений, производя операции в случаях, которые-бы быть может разрешились-бы спонтанно, и поэтому должны прибегать к таким интервенциям, как наложение щипцов, версия и их частей сопутних — базиотрипсия.

Cirugía Gástrica *

(Gastric Surgery)

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SUMMARY

The various surgical procedures in the treatment of gastroduodenal ulcers are discussed. Gastrectomy (Pólya type) is recommended as the method of choice, and the reasons for this preference are given on a physiopathologic basis.

EN LA cirugía gástrica es problema a discusión las indicaciones de la gastro-enteroanastomosis y la gastrectomía; a pesar de las estadísticas presentadas por cirujanos de todos los países, las indicaciones de una y otra siguen sujetas a preferencias de escuela o a simpatías personales.

La gastro-enterostomía gracias a los primeros resultados verdaderamente sorprendentes y quizás a la falta de observación por largo tiempo de los enfermos, sus indicaciones se fueron ampliando y se alejó de la primera para la que fué creada: la extenosis pilórica, así es como podemos observar en diversos tratados que se aconseja la anastomósis para las más variadas lesiones y los más diversos síndromes gástricos; los que a la luz de las estadísticas, de los estudios clínicos y de los radiológicos proseguidos al cabo de los años en enfermos operados, se ha comprobado no sólo su falta de utilidad terapéutica, sino tambien su nocividad.

Los estudios de fisiopatología han descartado terminantemente las primitivas indicaciones de la operación; como por ejemplo: en la hiperclorhidria rebelde, en la gastrosucorrea, en las dispepsias, en los diversos síndromes pilóricos por úlcera gástrica o duodenal sin tomar en cuenta la localización precisa de la úlcera, ni sus caracteres clínicos y anatómicos.

La gastro-enteroanastomosis es operación que sólo obra restableciendo la en la extenosis pilórica por úlcera del píloro cicatrizada, puesto que es operación que sólo obra restableciendo la evacuación normal del estómago. Encuentra *menor indicación en los síndromes* pilóricos por lesión ulcerosa en evolución pues en éllos las estadísticas nos demuestran, que salvo aquellos casos en que el tratamiento médico asociado ha podido cicatrizar la úlcera, los peligros de las complicaciones (hemorragia, perforación, cancerización, etc.), siguen existentes y aún agravados por los fenómenos de círculo vicioso; de evacuación simultánea por la boca anastómica y la vía natural o por el reflejo duodenal que si bien abate la acidez, especialmente del ácido clorhídrico libre predispone en cambio, al decir de las estadísticas, a la cancerización de la úlcera. En relación con el abatimiento de la acidez libre, causa muy frecuentemente invocada si nó para la rodu
de la úlcera, sí para su pe

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[*] Presented at the Third International Assembly of the International College of Surgeons held in Mexico City, August, 1941.

estudios y las estadísticas más recientes son tambien poco demostrativos de la utilidad de la operación: para Lewisohn la baja de la acidez es de sólo 3 por ciento. Opinión semejante expresan Von Haberer y Braithwaite en copiosas estadísticas. Moynihan insistía sobre el número considerable de cánceres descarrollados sobre viejas úlceras operadas por gastro-enterostomía a pesar del buen funcionamiento de la boca anastomótica. Los trabajos de Anatomía Patológica de Orator llevados a cabo sobre 170 piezas de resecciones, secundarias a la gastroenterostomía encuentra que hay transformación maligna en 2 por ciento de los casos para el fundus y de 30 por ciento para las úlceras prepilóricas. Quizás como decíamos la falta de observación durante varios años de los enfermos gastro-enterotomizados ha hecho a algunos cirujanos guardar fidelidad a ésta operación en los casos arriba mencionados; pero para todos, es de práctica cor- ente asistir a enfermos gástricos con ica sintomatología a los que años antes se les había operado de anastomósis.

Las gastroscopías sucesivas practicadas a estos enfermos, nos han demostrado la persistencia de su estado ulceroso y aún las alteraciones gástricas en las proximidades de la boca anastomática, (edema, rigidés, enrojecimiento y sequedad de la mucosa) por esto habría que pensar con Gutmann que la persistencia clínica y radiológica, y agregamos nosotros gastrocópica, parece justamente el mejor test de malignidad. Si a éstos enfermos se les sujeta al tratamiento sintomático de practicarles una vía de evacuación-gástrica con lo que si bien disminuyen sus molestias, porque el síndrome pilórico se oculta; fácil es comprender el futuro de ellos. En tales casos la gastro-enterostomía hace las veces de tratamiento paliativo que encubre el serio drama de un cáncer en evolución tidario de la gastro-enterostomía, confiesa en 187 operados 4 han tenido poste- y pues la cirugía moderna trata de definir las causas para suprimirlas, huyendo de los tratamientos que ocultan la realidad del proceso patológico debería ser proscrita toda operación que sólo llenare un desideratun parcial, sintomático o mecánico, aún corrigiendo la manifestación pilórica, pero sin quitar la causa intrínseca del proceso.

La gastro-enteroanastomosis igualmente ha sido aplicada en la terapéutica de las úlceras duodenales (aún—cuando actualmente se consideran comprendidas dentro de un sólo síndrome la úlcera gástrica y la duodenal, llamándose la enfermedad ulcerosa, por tener patogenia, fisiopatología, sintomatología y evolución comunes y aún por la frecuente coexistencia de ambas); en cualquier forma, la predilección que los cirujanos han tenido para ella, nos induce a meditar que si bien su indicación precisa sigue siendo la misma: la estenosis pilórica que nos obliga a abrir una vía de derivación; en cambio el sólo hecho de disminuir el paso del contenido gástrico o aún suprimirlo por el duodeno, pondrá en reposo el órgano y en condiciones mejores de reducir la infección y por ende en vías de recuperar su fisiología normal. Estas son quizás las razones por que nuestras estadísticas mejoran tratándose de úlcera duodenal no complicada (hemorragia, perforación, periduodenitis, lesión angiovesicular, etc.).

En cuanto a las estadísticas extranjeras las más de éllas parecen ser muy favorables, aún cuando algunas no hacen referencia a observación por varios años de sus enfermos. En úlceras duodenales no complicadas Galpern sobre 524 enfermos seguidos por uno a tres años encuentra 67.2 por ciento de buenos resultados, 10.9 por ciento mejorados y 21.9 por ciento de resultados muy mediocres o malos. Una primera estadística de la clínica Mayo daba curaciones en 90 por ciento sin indicar duración de vigilancia de los enfermos en más recientes estadísticas no se muestra tan optimista.

Savikoff da un promedio de 74 por ciento de éxitos. Florkcenda 55 por ciento. Ohly se muestra menos satisfecho, pues la curación sobrevino en sus enfermos en 38.8 por ciento. Junernann da 48.8 por ciento. En cambio Hartmann, gran parriormente a la operación cáncer gástrico; en un número semejante de operaciones hematemesis muy graves han sido observadas en cuatro casos más. Rossi y Scaloni dan como curaciones definitivas 55 por ciento y como fracasos que han necesitado volver a intervenir 9 por ciento. Para Sauerbruch las curaciones son de 25 por ciento. La última estadística ofrecida por Moynihan a la ciencia médica hacía descender curaciones a 45 por ciento y todos ellos están de acuerdo en que las mejorías se sostienen a favor de un prolongado tratamiento dietético y médico y que cualquier abandono de éstos hace reaparecer los trastornos y aún requieren nuevas intervenciones.

En la gastro-anastomosis, en las úlceras del duodeno no complicadas de hemorragia o de tendencia a la perforación con nicho voluminoso, incrustado o nó en los órganos vecinos, úlceras calcificadas, trastornos de infiltración periduodenal o de la encrucijada hepática; todos los cirujanos están de acuerdo en proscribirla puesto que no siendo úlcera simple y teniendo lesiones sobre las cuales no operará la derivación y debido a la gravedad de las lesiones; casi, repetimos, no hay cirujano que siga siendo fiel a la anastomosis si no es asociándola a otras operaciones (excisión, exclusión, etc.).

La misma indicación formal de la gastro-enteroanastomósis la estenosis del píloro va perdiendo campo en la cirugía moderna a favor de las pilorectomías o las piloroplastías. Si la causa de la estenosis es producida por tumor maligno y éste es operable, la pilorectomía sigue siendo la regla de conducta; más cuando el tumor maligno es inoperable, como paliativo es discutible la indicación de la yeyunostomía.

Por su poca mortalidad la gastro-enterostomósis (3 a 5 por ciento), facilidad de técnica y rapidez con que se puede ejecutar así como por la fácil anestesia que en ella se puede emplear (local), tiene su plena indicación como operación previa a la gastrectomía, a la exclusión, a la resección, etc., en enfermos profundamente desnutridos en los que una intervención mayor pudiera poner en peligro su vida; y como operación paliativa que permita al enfermo alimentarse, mejorar su estado general y elevar su potencial energético.

Las diversas gastrectomías si bien no están exentas de críticas y graves inconvenientes, tienen en cambio la enorme ventaja de ser operaciones que llevan como mira la curación del proceso patológico por la extirpación de la lesión, la modificación del quimismo gástrico y la recuperación quinética del órgano, lo que le llevará a su reintegración fisiológica; no desconocemos los peligros de las úlceras recidivantes aún en la misma boca anastomotica de las úlceras pépticas siempre menos frecuentes mientras má alta sea la resección gástrica; si la técnica y el post operatorio pueden ser un poco más laboriosos, ello depende de saber legir el procedimiento operatorio y la táctica pre y post quirurgica. Queda para nosotros como procedimiento de elección en las úlceras gastroduodenales la gastrectomía con la técnica que desde hace año usamos y que nos ha permitido abatir la mortalidad a cifras tan bajas como las de la gastroenterostomía, con la ventaja de lograr curaciones estables en enfermos seguidos por más de cinco años

SUMARIO

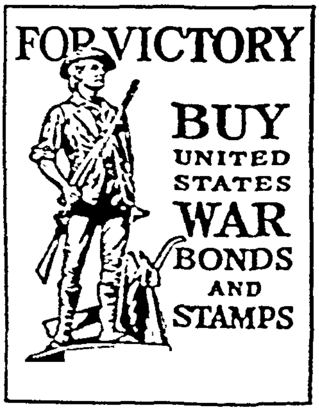
El autor después de pasar en revista diversas estadísticas personales y agenas así como de hacer la crítica de los diversos procedimientos quirúrgicos empleados para el tratamiento de las úlceras gastro duodenales y en especial de la gastro-entero-anastomosis y su fundamento fisio-patológico y de los resultados lejanos obtenidos con élla. Finalmente se pronuncia per la gastrectomía como procedimiento de elección e igualmente de las bases fisio-patológicas en que apoya su preferencia. Acompaña su trabajo con una película de gastrectomía hecha por el procedimiento Pólya II Asa Larga.

RÉSUMÉ

L'auteur aprés avoir passé en revue divetrses satistiques personelle et d'autres et ayant fait la critique des divers procédés chirurgicaux employés par le traitement des ulcéres gastroduodenaux et specialement la gastroenterostomose et sa base physio-patologique ainsi comme les résultats lointains obtenues par elle-méme. Se prononce finalement pour la gastrectomie comme procédé de choix et donne également les bases physio-patologiques que appuient cette preference. Le travail est accompagné d'un film de gastrectomie par le procéde de Pólya II Ase Long.

Выводы

Всевозможныя хирургическия процедуры в лечении гастродуоденальной язвы рассматриваются. Автор дает предпочтение гастректомии (типа Полиа) но физиопатологическим соображениям.



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Nasal Mutilation in India and a New Rhinoplasty

HENRY T. TAUBER-HRADSKY, M.D., PH.D.
NEW YORK, NEW YORK

IN MY two journeys to India and Ceylon in the last 15 years, especially during my latest stay of over 16 months in India proper, I had an excellent opportunity to study more than 50 cases of the so-called Indian nasal mutilation.

I encountered these cases in the modernized streets of cities and dusty paths of villages, in the vicinities of decaded huts and marble palaces as well. I treated them and saw them treated by native Indian surgeons in old fashioned country hospitals and in many well equipped modern institutions. I noticed the consequences of this hideous relic of the past among the Singhales and Tamil population in the flat damp seashores and in the mountainous, jungle covered central Ceylon. I noticed the desperate features in males and females in the northern and central parts of India, on the west coast in the Poona and Bombay districts, in the out-skirts of the arid Rajputana territory, in the very heart of the mountain fortress of Sirohi state, the mysterious plateau of the Narvalli range at the famous Mt. Abu.

I also found cases widespread among the people of the chivalrous Jodhpur state where it is so frequent that it contributes the most dominating plastic surgical material for the hospitals in the cities of Jodhpur, Jaipur and Udaipur, but I also saw many cases in the streets of the vast capital of India, Delhi, and in the old pilgrim town of Benares, in many villages and cities of Ganges valley and, last but not least, in Calcutta, on the ghats of the revengeful goddess Kali.

I am sure that in all India there are more than 5,000 people mutilated, bereft of the most conspicuous part of the face, and if the attentive medical man does not see all of those unfortunate creatures, it is because more than half of them are women, who conceal their mutilation behind their purdah veils and because in some districts the dead mens' noses are already covered with flaps of skin. One is at first puzzled when met with such a horrible willful destruction of the countenance in a land of the meek, compassionate Buddha and Mahadeva and of the most merciful Allah, especially in the country of a non-violence preaching Gandhi. However, from a historic point of view, it is quite natural that the juridical custom of nasal and similar ostentative body mutilations, which were so common under the rules of barbaric and semi-barbaric conquerors and usurpers of the vast realms of India, had its roots in the primitive, rude mentalities of the belligerent Mongoloid invaders.

The average man in India, and also in other parts of the Asiatic continent, is in his habits, in the bad as well as the good ones, an extremely conservative creature. The ethical and esthetic ideas of higher cultured individuals can rarely interfere with the mentality of the masses, and when we take into account the elementary, revengeful accessorial qualities of the lesser divinities of the

Hindu religion and the fanatic fatalism of the old Moslem creed, the explanation of cases of lynch law or official punishment is much easier.

As already mentioned, the evil of mutilation is a relic of previous centuries, where the nose-cuts, ear-cuts and mutilation of sexual organs, etc., in the occidental and oriental countries, but especially in India, were officially established as a current punishment and were commonly practised. Moreover, mutilations were not looked upon as entirely inhuman, as the life and the personal freedom were left undisturbed. The purpose of such inflicted punishments was aimed more for their depressive, psychologic effects. Made miserable by spiritual tortures, connected with a mutilated face deprived of its most conspicuous part, the victim was condemned to live amongst his fellowmen until his death with features which were quite significant in their meaning. Besides, when such mutilation was inflicted on a young individual, it caused a decidedly asexual effect. No other mutilation of the body could equal it.

The nose, in the opinion of the ancients as well as modern society, is the determining point of an individual's external character, an ornament in women and besides this the expression of vigor and spiritual power in man. The war prisoners were mutilated by their victors in large numbers, an act capable of influencing the moral level of both sides in opposite directions. If we go back to those ancient times when the moral and physical sensitiveness in men and women was less than today, when instead of moving a person's pity for the unfortunate victim and with detestation toward the mutilator, a crippled one became a target for ridicule and malicious satisfaction, we might better understand the origin of Indian nasal multilations. In those times such official public punishments promoted respect for [illegible] nd law makers, with admiration for the stronger one. From this fact, again, we can understand the universality and the fashion of such punishment.

As already mentioned, one has to consider that such "amputation" of the nose was practised during the entire Middle Ages, and in the early modern times, even in Christian Europe, as a personal revenge in private life and as a stigma by those contemporary juridical codes. This was the case in Italy, where it gave an impetus to the plastic repair done by Brocca, developed eventually by the famous Tagliacocci into a whole scientific surgical procedure.

The famous astronomer, Tycho De Brahe, lost his nose in a scuffle, and I saw very distinctly in his sculptured face in Prague's Teyn Church on his marble sarcofag the artificial prothesis he used to wear.

The married man in India, who becomes suspicious of the faithfulness of his wife, feels himself more or less justified by tradition in inflicting an everlasting stigma upon her face. Such cases are very frequent, especially in the northern part of India. I had the rare opportunity to see several cases just a few hours after such an "operation." In Mt. Abu's Adams Memorial Hospital I photographed the victim of a husband's jealousy (Fig. 1). The patient was a 20-year-old wife of a laborer residing not very far from the world famous Delvara Marble Temple. Her husband, a Bhil man of the dark Dravidic tribe spread all over Central India, cut off her nose and the upper lip, being assisted by some friends who held down the shrieking victim. He used a heavy jungle knife for his grotesque action, an implement usually necessary for cutting bamboo sticks in the surrounding jungles.

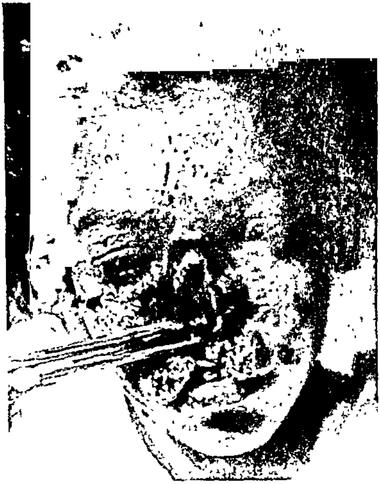

Fig. 1. Mutilation of nose and upper lip.

at about four o'clock in the morning as she slept on the floor of her hut. The "corpus delicti," the parts of the nose and the whole upper lip, was found by the policeman on the roof of the neighbor's house, and was presented to me in a rag. All the soft parts of the nose were completely cut off. The skin in the vicinity of both sides of the cheek was denuded in all layers deep into the subcutaneous tissue. The whole apertura piriformis, the cartilaginous septum in cross-section, was visible and so were the conchæ inferiores and mediæ. The upper lip was lost almost completely, only two short flaps hanging loosely down on both corners of the mouth. The hemorrhage was small but became abundant after the surgical cleansing.

I was requested to attempt to suture back the cleansed end and pieces of nasal tissue submerged for half an hour in warm saline solution. As I expected, the third day after operation the fixed pieces sloughed and were removed. I think that even if I had had the opportunity to fix the amputated nose immediately after the damage had been done, not one patch of the tissue could have been saved, with the exception of the cartilages, which could have been stored under the skin to be used as framework in future rhinoplastic procedures. From various Indian stories we know that as soon as the whole nose of the victim was cut off it was thrown by the executioner into the fire. This additional performance was surely unnecessary.

The devastating injury in the Bhil girl eventually healed per secundum. Other cases that I had the opportunity to see were more or less healed already or, to some extent, repaired by local surgeons. Such a combined nose and lip amputation as I have just described, is not infrequent. In other cases only a part of the soft nasal tissue is chopped off, leaving more or less large remnants of alæ or the collumella. The lips in such cases are intact, a circumstance which facilitates to a high degree the subsequent reconstructive procedures.

During my stay in India and Ceylon, I rarely saw any damage done to the bony part of the nasal bridge, explained by the great resistance of nasal bones to the knife.

It is remarkable in such mutilations to what extent the adjacent tissue areas become atrophic after complete healing has taken place. The subcutaneous fat becomes partially resorbed during and after the healing process, and the facial muscles connected with the fascia of the neighborhood of the nose retract. For that reason the fossæ canini become deepened. Those morphologic changes must be borne in mind when reconstructive surgery is to be undertaken.

How was it with those often mentioned reconstructive operations performed in the remote centuries by Indian surgeons? In many of the modern textbooks on plastic surgery we find an artistic facsimile reproduced, first published in the year 1798 in the old British Indian magazine *Gazette De Madras.* In this picture is a gravure of an Indian rhinoplasty, performed on a certain Cowasjee, a Mahratta, who lost his nose in addition to his hand in the services of the British Army in a war against the rebellious Sultan of Tippo. In a paragraph entitled "A Singular Operation" is written that such surgery has been practised "from time immemorial" in India. The picture itself shows the result of a subtotal rhinoplasty, after a typical Indian mutilation. Success is so complete that it hardly could be imitated by the most clever modern plastic surgeon.

Although I do not wish to belittle the apparent skillfulness of the responsible Maharetta Surgeon of Kumar in the Poona district, and do not doubt the genuine origin of rhinoplasty in the re- otest times in India, I daresay that the inter of that accomplished rhinoplasty ealized the Master's work to the highest degree. We know that a rhinoplasty without an almost simultaneous added lining never leads to permanent esthetic or even physiologic results. I know that the construction of the lining was never practised in ancient India and at present is rarely done by Indian surgeons of the old school. The esthetic results achieved by those surgeons are the same as they were with European and American surgeons when the importance of lining had not yet been recognized.

In the previously mentioned clinical report we are told that the picture of the healed patient was painted by the artist ten months after the plastic operation. The nose already at that time must have had the clumsy shape of every other unlined rhinoplastic repair. The painter, however, was apparently obliged to make a sensation worthy of imitation by European surgeons of an operation with his artistic and artificial contribution to the medical world at that time.

During my stay in India, I saw such old-fashioned rhinoplasties without lining many times and all of them had the same esthetic and physiologic disadvantage. They were too short and made the expression of the face ridiculous, and by the shrinkage of the nostrils hampered the nasal breathing. For many Indian patients with very modest esthetic demands, those repairs are sufficient. After all, the shrinked tissue covers the still more hideous nasal defect. The great advantage of such procedure lies in the short hospitalization of the patient and in the easy surgery which, in view of the bad climatic circumstances in India, is a very desirable factor. I have used this classic Indian method as the first stage of my final rhinoplastic operation to demonstrate to my Indian colleagues the difference between the obsolete procedure of such subtotal unlined rhinoplasty and the American combined technic. Later, I performed in such cases of previous reconstructions an accomplished repair using the skin of those misshaped nasal substitutes for lining of the final reconstruction of the nose. Eventually, I developed my own technic which I afterwards practised in India with satisfactory results many times.

It will be of some interest to know how mildly sentenced by the British Indian legislation are such criminal nose and lip amputations. If it had been shown that the husband was justified in his suspicion of the unfaithfulness of his wife, he was lucky enough to get only six months' imprisonment. Marriage in India since time immemorial is looked upon as sacred until death and, therefore, the unfaithfulness of the wife is a great crime in the eyes of everyone and she must be ostentatively punished by the offended husband or his relatives.

TECHNIC OF INDIAN RHINOPLASTY

Not being influenced by the recent American rhinoplastic literature and without the previous knowledge of Koenig's similar procedure (he used to provide support and lining by two flaps from the forehead in partial rhinoplastics), I fashioned my own method directed by the following needs.

Conditions of religious, cultural and economic nature in patients of British India, make it necessary to shorten the hospitalization and morbidity time of the patient as much as possible and, at the same time, to satisfy his modest esthetic and high ethical desires to the greatest possible extent. Sometimes the religious life and superstitious tradition interfere with the expectations of the surgeon. In an average Hindu from the highest to the lowest castes, the determination of the date on which the operation has to be performed depends on astrologic predictions. If the date is not favorable, *i.e.*, against his horoscopic prediction, the consent to the operation on the day chosen by the surgeon is in most cases refused.

Every major operation as, for instance, the removal of cartilage from the rib to provide a better support for the bridge and tip, gives another psychologic shock to the Indian patient, which must be avoided. I operated on a woman in Jodhpur's Purdah Hospital, who had a rather unsuccessful rhinoplasty performed by an Indian surgeon years earlier. She came to the hospital with a roughly shaped nose-like protuberance in her face, the nostrils being so narrow that she could scarcely breathe. I decided to make a better shaped nose with wide nostrils, using a rope flap from the arm. After the flap had been raised and shaped into a rope the patient remained in the hospital. The next day she complained that she expected an operation on her nose and not on her arm. We tried to explain that this was only a preliminary procedure. The stitches were removed on the eighth day, after perfect healing. The patient left the hospital suddenly the following day and never returned.

Being influenced by such leading motives I eventually came to the conviction that subtotal rhinoplasty in India is to be done with better prospects when performed according to the old Indian method, improved, of course, by an additional lining and support, both provided from the skin of the forehead. The removal of a composed flap from the forehead, *i.e.*, skin and bone tissues, is quite a taxing operation for a Hindu patient and, therefore, better avoided. An additional costal operation for cartilage support is not advisable in India for reasons already mentioned.

Fortunately, my Indian patients, especially the men, were all provided by nature with a high and broad forehead and with well developed bald patches in temporal regions (Fig. 2). Therefore, in most of my cases, I was able to take flaps from both sides of the forehead. I outlined a flap on the right side of the forehead in a calabas shaped design for support and lining purposes. After a delay of 10 days, I shifted this primary flap down over the defect. After 12 or 14 days its pedicle was cut and turned back to the forehead, the rest of the forehead defect being filled by free full thickness graft.

Such an operation was approximately the classical ancient Indian rhinoplasty with the same ornamental effects. About four weeks after the operation the transplant shrunk into a plump skin-covered piece of tissue, hard in consistency, with a firm scarred under-surface (Fig. 3).

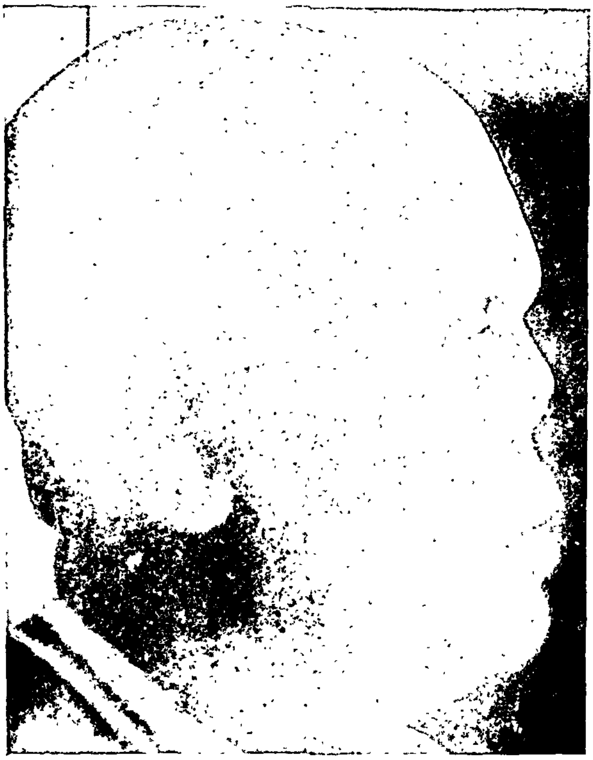

Fig. 2. Photograph before operation.

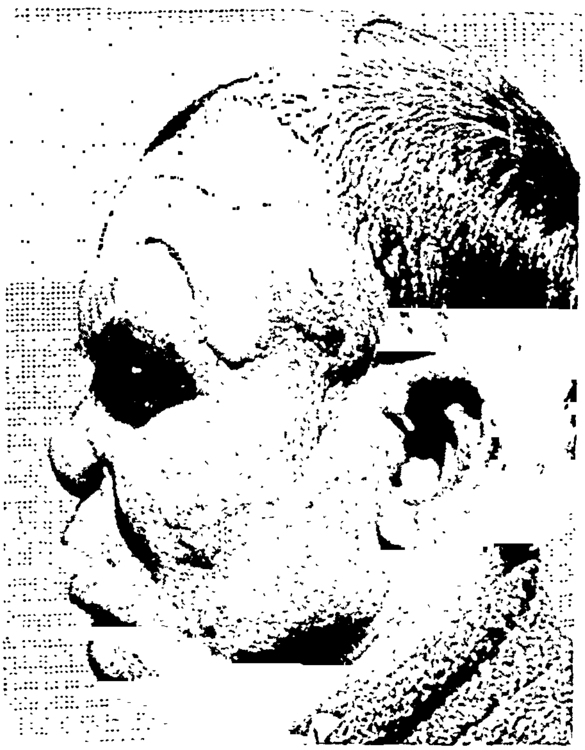

Fig. 3. Photograph after operation, showing transplant.

er this I made a wax model of the fu- e nose, covered it with tin foil, and stretching the tin foil, I fashioned a flap somewhat larger on the left half of the forehead presenting all regional parts of nose-bridge, alæ, tip and collumella. The collumella portion presented a strip of skin, one inch long and a quarter of an inch broad, being raised in the most lateral and distal temporal region. This strip was left attached at both ends. After a week's delay of the collumella portion, I raised the area which was to build up the bridge, tip and alæ of the final nose and separated the proximal end of the collumellar flap from the undersurface. After another ten day delay I cut the pedicular part of the secondary flap, raising again at the same time both previously delayed parts of the flap, but waiting another four or five days before separating the still attached distal end of the collumella portion.

After an elapse of another five days I eventually raised the entire flap and turned it downward to construct the nose (Fig. 4). For this purpose I prepared the first transplant to get a lining for the tip, alæ and collumella, dividing the upper skin-covered surface into three skin flaps. The lateral two served for the lining of the alæ, the medial one for the lining of the tip and collumella. The skin over the radix nasæ was partially removed, the margins of the still visible lower part of apertura pyriformis defect freshened up, both to be used as recipient areas for the secondary flap. Thus the roof of the lower part of cavum nasi was formed in its upper portion by the scarred undersurface of the first transplant, the lower part formed the three flaps outlined with skin and only two narrow portions between those three flaps were of one layer, to be epithelialized from the neighborhood. In some

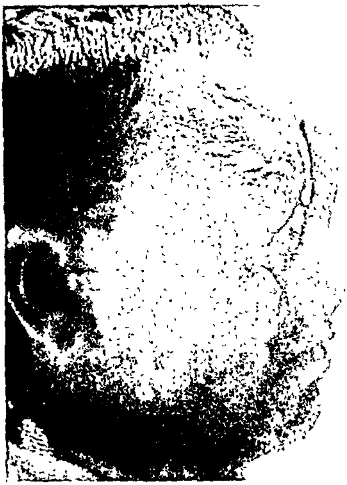

Fig. 4. Photograph taken five days after operation. Flap was raised and turned downward to construct nose.

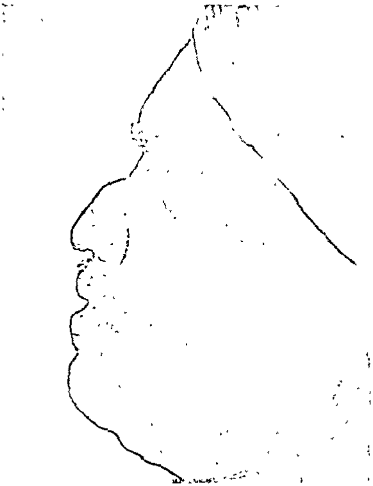

Fig. 5. Photograph showing result of operation.

cases I delayed even those three lining flaps before the major surgery.

Usually, after two weeks, the raw surfaces were in firm contact and the cutting and returning of the pedicle into the donor area were performed by using a full thickness graft to cover the balance of the forehead defect. If this operation was not done simultaneously with the major surgery then the final modeling of the nose was spared for a later period. The result of my technic after the usual swelling of transplanted tissue vanished, was a natural looking nose with a distinct tip, protruding alæ and well adopted to the features of a Hindu face (Fig. 5). The lined, well-opened nostrils allowed full air passage. The whole rhinoplasty could be achieved in ten weeks' time without a great strain on the patient. The results obtained by my technic were good, especially in those cases where the nose repair already existed, performed by a local Indian technic (without lining) and where there was enough space on the forehead for the formation of the secondary flap.

The advantages of my technic are:

1. Avoidance of a continuous or interrupted hospitalization longer than ten weeks.
2. Omitting the costal cartilage operation, abhorrent to an Indian patient.
3. By careful delaying of all parts of the secondary flap, lessening the possibility of sloughing—a serious development for the pessimistic Indian patient and sometimes too optimistic surgeon.

SUMMARY

Nasal mutilation is a common act of revenge in many parts of British India since times immemorial. [illegible] sti [illegible] air was practiced thousands of years ago and up to the present time in a rather primitive way, without lining and with poor esthetic results, contrary to overestimated reports of many text-books on plastic surgery. The author's own method of rhinoplasty during his stay in India consisted of two stages, adjusted to the prevailing peculiarities of the mutilation, to the mentality of the Indian patient and to many other extrinsic factors. The first stage consisted of raising one forehead flap and attaching it in such a way as to provide both a lining and a support for the soft parts of the nose. In the second stage, another forehead flap was used to provide the outer cover and render the final shape of the nose.

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SUMARIO

La mutilación nasal es un acto de venganza muy común y ampliamente esparcido en muchas partes de la India Británica desde tiempo inmemorial. "Reparación Plástica" fué practicada desde hace millares de años y hasta el presente en una forma más o menos rústica, sin revestimiento de la mucosa y con resultados estéticos de mala calidad, contrario a los exagerados reportes de muchos textos de Cirujía Plástica. El método propio del autor durante su permanencia en la India consistía en dos secciones ajustadas a las peculiaridades existentes de la mutilación, a la mentalidad del Indio y a otros muchos factores extrinsicos. La primera sección consistía en levantar un colgajo o flap y adherirlo de tal manera que proporcionara a la vez revestimiento de la mucosa y apoyo a la punta de la nariz. En la segunda parte o sección, se usaba otro flap para proporcionar la cubierta exterior y dar la forma final a la nariz.

RÉSUMÉ

Les mutilations nasales constituent un acte de vengeance assez commun dans de nombreuses régions des Indes Britanniques depuis des temps immémoriaux. Des "réparations plastiques" ont été pratiquées depuis des milliers d'années d'une manitre primitive sans tapisserie intranasale et avec des résultats esthétiques peu satisfaisants, contrairement aux reports trop optimistes del livres de texte de chirurgie plastique. La méthode rhinoplastique de l'auteur pendant son séjour aux Indes consistait de deux opérations, dépendant des particularités de la mutilation, de la mentalité du patient et de nombreux facteurs extérieurs. La premiere opération consistait en levant un lambeau frontale et en l'attachant de facon à constituer en même temps une tapisserie interne et un support pour les parties molles du nez. Pendant la deuxième opération, un second lambeau frontale était employé pour provoir une couverture extérieure et pour donner une forme définitive au nez.

Выводы

Изуродование носа, как акт мести, практиковался нередко в Британской Индии. Пластичныя операции, с целью востановления, проделывались со времен глубокой старости, конечно в грубом виде и с плохими эстетическими результатами, не смотря на метные отзывы во многих учебниках ортопедии. Метод автора, во время его пребывания в Индии, состоял из двух ступеней. В первой выкраивался лоскуток с кожи лба, который он пришивал так, что-бы образовать подкладку и опору для мягких тканей.

Вторая ступень состоит из вырезывания кожной лоскутки для формировки внешнего покрова и законченной формы органа.

ANNOUNCING THE FOURTH INTERNATIONAL ASSEMBLY OF THE INTERNATIONAL COLLEGE OF SURGEONS, IN CONJUNCTION WITH THE EIGHTH NATIONAL ASSEMBLY OF THE UNITED STATES CHAPTER, TO BE HELD AT THE WALDORF-ASTORIA HOTEL, NEW YORK CITY, JUNE 14 to 16, 1943.

Pursuant with the basic principles, objectives and ideals of the International College of Surgeons and in devotion to the war effort in defense of universal liberty, the International College of Surgeons dedicates its Fourth International Scientific Assembly to the presentation and discussion of papers, round table discussions *and demonstrations* of war surgery and a rehabilitation program. This meeting will be held in conjunction with the Eighth National Assembly of the United States Chapter of the College.

The solidarity in principles and ideologies which happily bind the Nations of the Western Hemisphere in the common effort and determination to maintain their traditional freedom, affords exceptional opportunity to the Chapters and to the Fellows and Representatives of the International College of Surgeons in the Americas to participate in the Assembly and its purposes. All Chapters of the United Nations have been invited to participate.

On the occasion of this outstanding military program, with the latest lessons in war surgery and rehabilitation in post-war conditions, a most cordial invitation is herewith extended to the Chapters, to the Fellows and Representatives of the International College of Surgeons, to military personnel in the United Nations, and to the profession of the United States of America and Canada.

It would be highly appreciated if the Fellows of your Chapter and the military personnel of your country would participate in the scientific program. Owing to the limited time at our disposal, titles of papers, demonstrations and round table discussions should be sent to the *Chairman of the Program Committee,* Dr. A. A. Berg, 10 East 73rd Street, New York, New York, by air mail or radiogram.

Fred H. Albee, M.D., *President,*
INTERNATIONAL COLLEGE OF SURGEONS

Thomas A. Shallow, *President*
UNITED STATES CHAPTER F TH
INTERNATIONAL COLL [illegible] S

Surgery of Congenital Anomalies of the Female Genitalia

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BROOKLYN, NEW YORK

CONGENITAL ABSENCE OF VAGINAL CANAL, UTERUS AND TUBES

WE ALL know that the female genital tract develops from two separate and distinct germinal structures called the Mullerian ducts. When the Mullerian ducts fail to develop there is a complete absence of the uterus, tubes and vagina, as exemplified by the case we are reporting here. Should the partition between the lowest part of the Mullerian ducts fail to absorb, there would be a double hymen; if the failure continued farther up, one would find a double vagina, and if still higher, a double uterine cavity with a partition between them. Again, when the middle of the Mullerian ducts fails to fuse there would be a partial or complete double uterus, depending on the degree of the fusion. Should the upper ends of the Mullerian ducts fail to develop, one would encounter either a complete absence of the tubes or only rudimentary tubes.

The combination of possible malformations is varied both as to the anatomic construction and the clinical manifestations. One of the common anomalies that is most amenable to surgery is the imperforate hymen.

The symptom that is quite often the first guide to the malformation is the disturbance of menstruation. Should the catamenia have failed to appear at the age of puberty, and no related symptoms have occurred, one has to suspect some congenital abnormality, such as an infantile uterus or an absence of the uterus, possibly even of the tubes and the vagina. When, however, the primitive amenorrhea is accompanied by the regular symptoms of menstruation, and even when these are aggravated, one must suspect some malformation of an obstructive nature, such as an imperforate hymen, or atresia of the vagina or of the cervical canal.

Some of the abnormalities may be corrected surgically, followed by a normal menstrual cycle, a normal sex life and prospective pregnancy. Other abnormalities are not amenable to surgical intervention, such as an infantile uterus or a complete absence of the vagina, which is generally accompanied by absence of the uterus and the tubes. In the latter case, one cannot expect much, except the possibility of establishing a vaginal canal. This may be justifiable in serving to brighten the marital outlook of the individual affected.

The absence of the vagina may not be discovered until time for the menses, failing which, a cause for the amenia is sought. The patient and the parents then become anxious regarding the future. They may be resigned to the existing condition until the prospect of matrimony presents itself, and the construction of a vaginal canal is indicated.

The related literature discusses the feasibility of the various procedures proposed. Most authorities agree that graft-

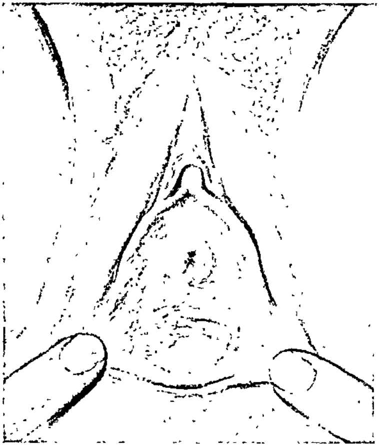

Fig. 1. Showing absence of vagina. The external genitalia appear normal up to the region of the hymen, behind which there is a complete absence of a vaginal canal.

ing skin from other parts of the body, or even from the adjoining labia and the skin of the thighs, is not usually satisfactory, because of the tendency of these tissues to become contracted, thus narrowing the vaginal canal.

Recently, development of a vaginal canal has been advocated with the use of graded sizes of glass test tubes, forced against the site of the hymen a few times daily, over a period of months, in order to produce and dilate a vaginal canal. The Baldwin operation for the construction of a vaginal canal from a section of intestine is the most satisfactory procedure, as the intestinal canal is lined with natural mucous membrane which has no tendency to contract. It also has a natural lubricating secretion. However, one must guard against the use of antiseptics, such as bichloride or other toxic drugs for cleansing of the new vaginal canal, as its lining, composed of intestinal mucosa, has greater power of absorption than the vaginal mucous membrane.

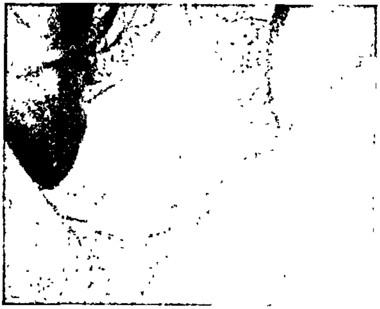

Fig. 2. The labiæ are spread apart, revealing a blind wall at the site of the hymen.

CASE REPORT

A girl, aged 29, was referred to us by her family physician with regard to the advisability of a plastic operation for the construction of a vaginal canal.

Family History.—The patient had had the ordinary diseases of childhood; history otherwise negative. The current complaint dated back to the age of 15, before she began to menstruate. At the age of 19, she was examined and the absence of the vagina was discovered. She was treated by packing the site of the vaginal canal with gauze, but treatment was abandoned after three months, as there were no results. The patient consulted her family physician because of pain in the right side of the abdomen. He advised surgery, with the hope of having a vaginal canal constructed, and she was referred for a plastic operation on August 2, 1941.

Physical Examination.—Adult female, well developed. Breasts normal in appearance.

Vaginal Examination.—Below the clitoris one could see the opening of the urethra in the normal location. Below the urethra, instead of a vaginal canal, there was a flat skin surface continuous with the labia minora laterally, and with the perineum posteriorly (Figs. 1 and 2).

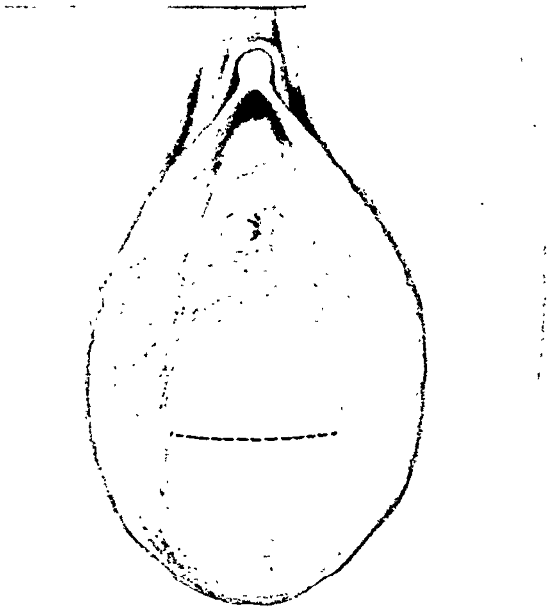

Fig. 3. Transverse incision. The first step of the operation is to make a transverse incision between the urethra and the perineal body and the tissues separated to form a canal up to the pelvic peritoneum.

On *rectal examination,* neither cervix nor dy of uterus nor ovaries could be felt. After ue consideration, we decided to attempt the construction of a vaginal canal with the aid of a loop of small intestine. We preferred the small intestine to the large, because danger of infection is less, and the small intestine is more accessible and freely movable.

Operation.—The patient was admitted to the hospital the day previous to operation. Laboratory examinations were negative. The operation was performed under spinal anesthesia (Fig. 3). A transverse incision, about one and one-half inches in length, was made midway between the urethra and the anterior border of the perineal body, at the supposed

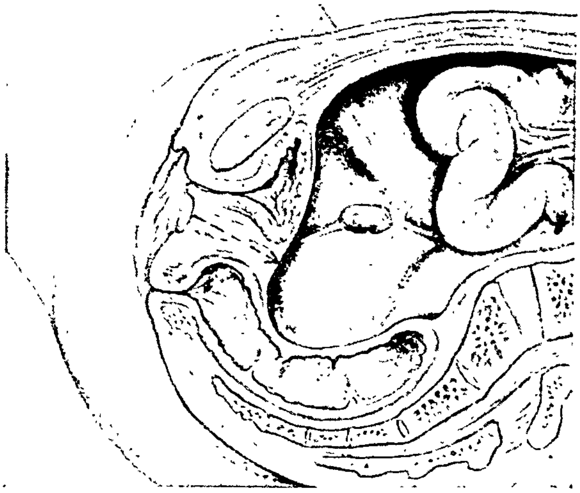

Fig. 4. Sagittal section, revealing the absence of a vaginal canal. The line indicates the tissues to be separated from the vestibule to the pelvic peritoneum.

was enlarged digitally for a depth of about four inches, reaching up to the vesicorectal peritoneum and admitting two fingers freely. A sponge stick was introduced all the way up to the roof of the canal and a two inch strip of iodoform gauze was tightly packed around the sponge stick to dilate the canal and hold the clamp in place (Fig. 5). The patient was then

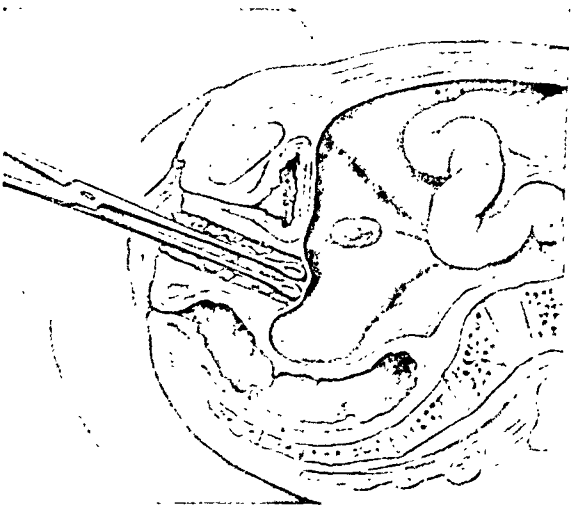

Fig. 5. The canal for the vagina has been made. Gauze is packed into this canal, surrounding the sponge stick with the blade held open. The rings of the blades are pushed against the peritoneum, which is later to be incised from above, for the passing of the loop of intestine.

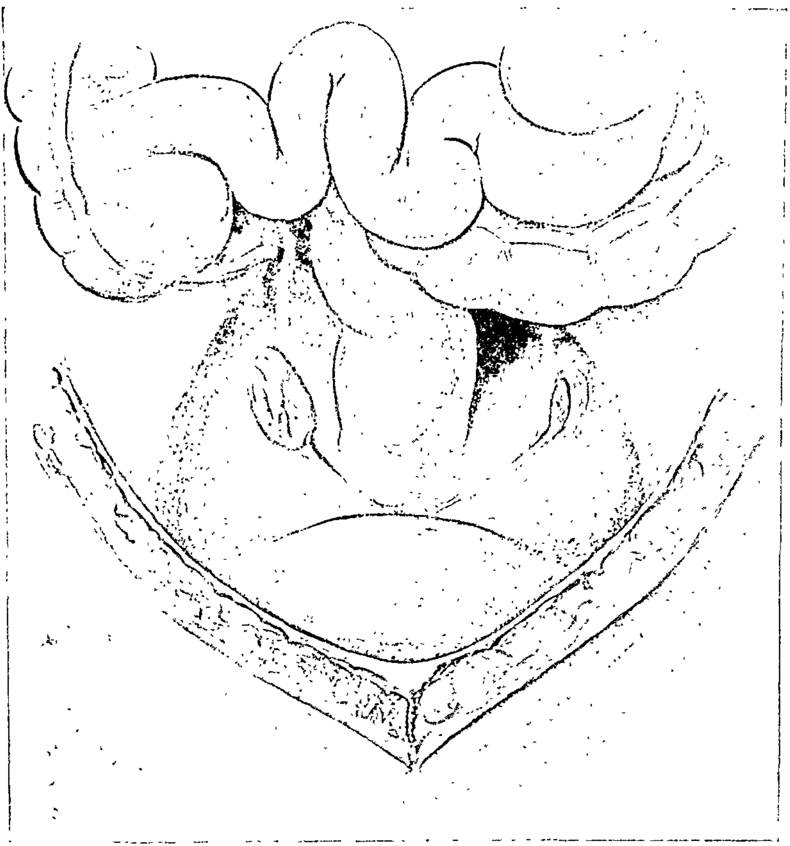

Fig. 6. Interior view of pelvis, revealing complete absence of uterus and tubes. The right ovary appears normal, with a faint ovarian ligament leading to the central space between the bladder and the rectum. The left ovary is rudimentary, much smaller, and imbedded underneath the peritoneum. It also has a fine band leading to the supposed site of the uterus. A loop of the ileum, about 8 in. away from the ileocecal junction, and about 8 in. long, is to be resected and passed between the rectum and bladder, in the space created for the vaginal canal.

placed in the supine position for a laparotomy. A median subumbilical incision about four inches long was made and the peritoneum was opened.

There was a complete absence of the uterus (Fig. 6). The peritoneum extended smoothly from the bladder to the rectum, without the presence of any uterine structure or tubes.

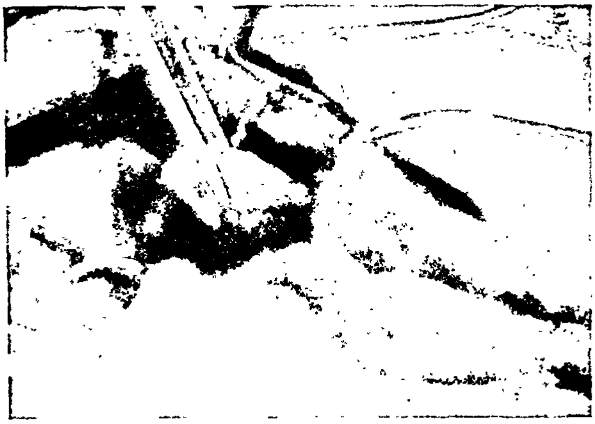

Fig. 7. Absence of uterus and tubes. The right ovary appears normal. The resected loop of ileum with its attached mesentery has a rubber catheter threaded to be used for traction.

The right ovary was found to be of about average size, white in color, corrugated, lying just at the brim of the pelvis, where the ureter crosses the right iliac artery. A rudimentary structure of an ovary about one-third the normal size was also found on the left side, in the same region. A semblance of an ovarian ligament could be traced from either ovary. The ileum near the ileocecal junction was injected; the appendix was normal, the cecum was quite mobile; the mesentery of the small intestine, about one foot away from the ileocecal junction, was not any too long, but we deemed it long enough to allow for the loop of the ileum to be brought down for the formation of the vaginal canal.

A segment of small intestine, about eight inches long and ten inches from the ileocecal junction, was cut away between clamps from the rest of the intestine, leaving it attached by a pedicle *of its mesentery (Figs. 7-9)*. The cut ends of the segment were closed with two layers of Lembert sutures and the cut ends of the remaining intestine were anastomosed end-to-end. A clamp was then passed through the mesentery near the middle of the loop of the small intestine. Through this little opening a rubber catheter was threaded to surround the intestine and to be used as a tractor to pull the loop through the artificial canal made for the vagina (Fig. 10).

An incision was then made in the peritoneum between the rectum and the bladder, while the sponge stick left in the artificial vaginal canal was forced high up from below by an assistant, so that its end protruded against the site of the cut peritoneum. An incision was made over the clamp through the fascia, while the ring blades of the clamp were

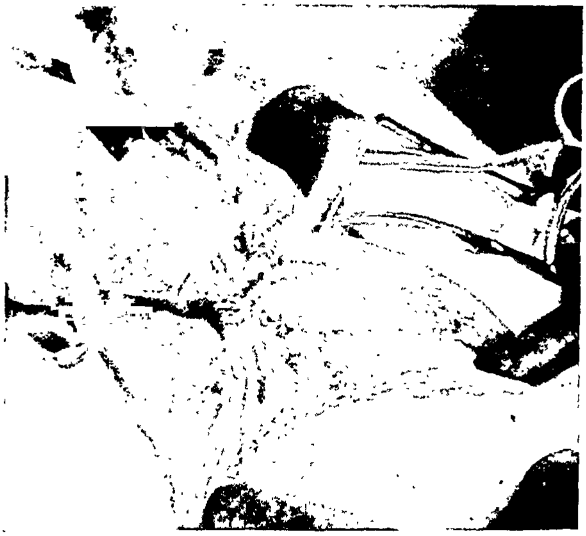

Fig. 8. Resected loop of intestine. The resected loop remains attached to its mesentery. The cut ends of the remaining intestine are anastomosed.

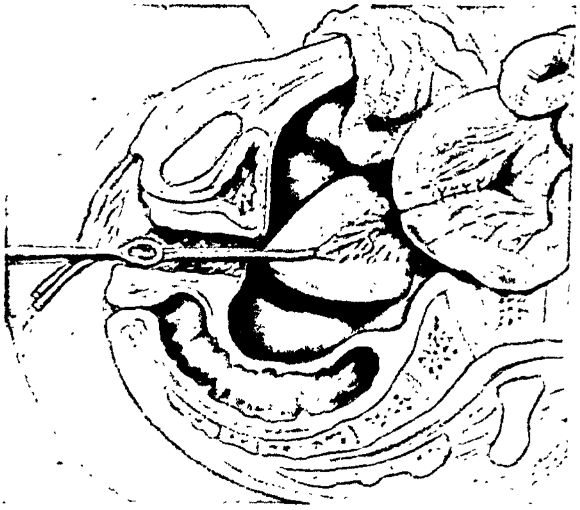

Fig. 9. Intestinal resection completed. The cut edges of the mesentery are approximated, and the cut ends of the intestine anastomosed. The ends of the resected loop of intestine are closed off, its mesenteric attachment is conserved. A fine rubber tube is passed through a hole in the mesentery to surround the loop of intestine. This is grasped by the ring clamp which was passed through the vaginal canal and into the pelvis.

Fig. 10. Space for vaginal canal. The sponge forceps was passed from below, ready to grasp the catheter to pull down the ileum.

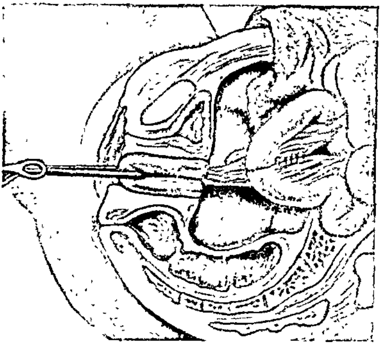

Fig. 12. Traction of the ring clamp pulls the loop of intestine down into the vaginal canal.

pushed up and opened wide, forcing the blades of the clamp into the peritoneal cavity (see Fig. 5). This opening was enlarged digitally, admitting three fingers. The two ends of the catheter were then grasped from below by the clamp held by the assistant, who also removed the packing from the canal to enable the catheter to be pulled down together with the loop of intestine, to the level of the perineum (Figs. 11 and 12). However, the mesentery of the loop was somewhat short so we had to leave the extreme ends of the loop above the canal. These ends were covered over by the peritoneum, which was raised above the ends of the intestine and sutured over with 00 chromic catgut (Fig. 13). The anastomosis having been completed, and the loop pulled through the newly formed canal, the abdominal incision was closed in layers without drainage.

The patient was then placed in the lithotomy position and the loop of intestine was found presenting at the proposed site of the vaginal orifice. With a few additional manipulations it was brought down below this level and opened longitudinally for about one inch,

Fig. 11. Passage of ileum into canal. The ileum is pulled half way down through the constructed canal. Note the moderate tension of its mesentery.

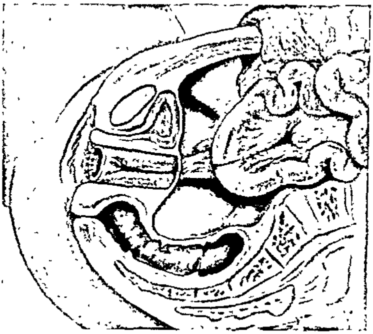

Fig. 13. The bend of the intestinal loop is incised and its margins are sutured to the surroundi surface.

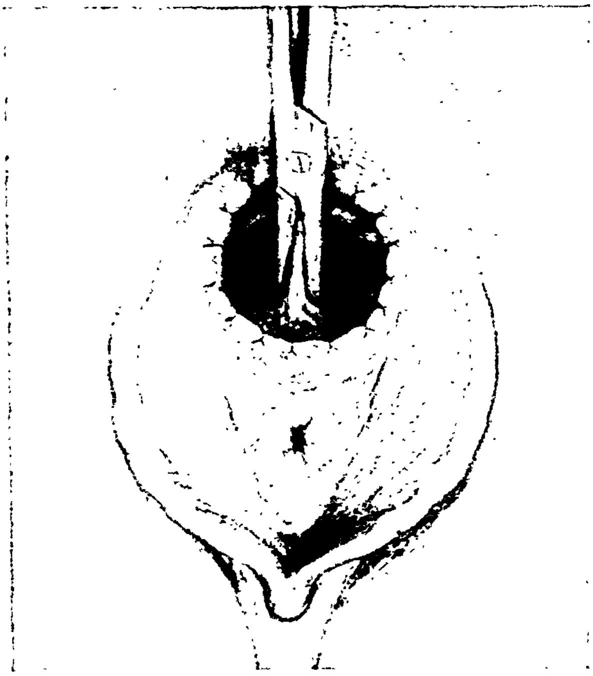

Fig. 14. The double-barreled vaginal canal. A clamp is applied to crush the partition.

Fig. 16. Vaginal examination. Vaginal canal admits two fingers.

along its antemesenteric border. This was followed by an escape of a few ounces of intestinal contents. The lumen of the bowel was then cleansed and the cut edges of the intestine sutured with interrupted 00 chromic catgut to the margin of the skin incision made at the beginning of the operation. About twelve such sutures were used (Figs. 13 and 14).

We now had a double-barreled canal, enabling one to insert a finger into each canal. Some strips of lubricated iodoform gauze were lightly packed into each barrel of the intestine and the dressing was applied.

The operation was performed under spinal anesthesia without the accessory aid of a general anesthetic. The post-operative course was uneventful, except for a slight rise in

Fig. 15. [illegible] weeks after operation.

Fig. 17. Roomy vaginal canal. A test tube about one inch in diameter is passed into the vaginal canal for about three inches.

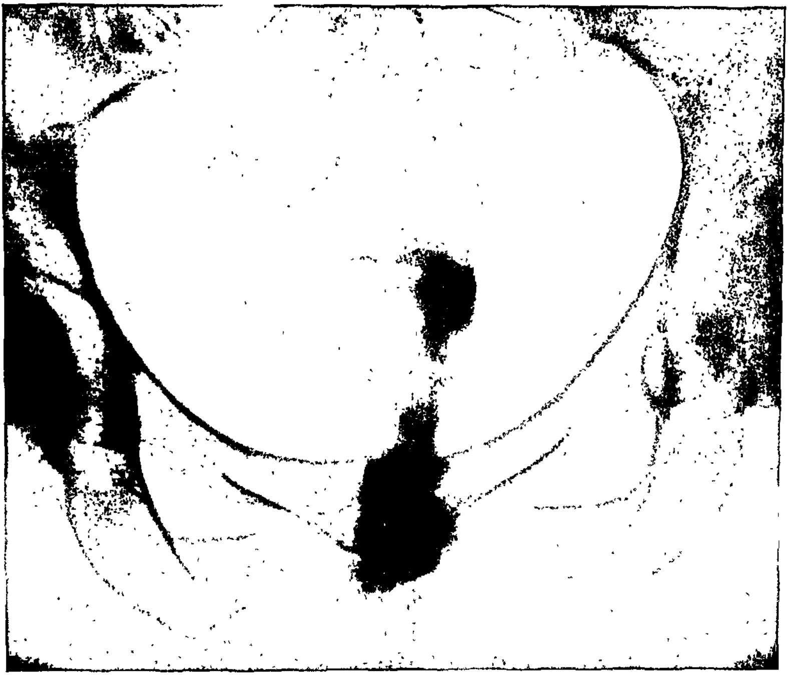

Fig. 18. Roentgenogram taken five weeks after operation. The vaginal canal is packed with strips of gauze soaked in 10 per cent solution of sodium iodide. The packing fills up the beginning of the vaginal canal and most of the left barrel. One can visualize the length of the vaginal canal to be about 4 in. long and about 1 in. in diameter.

temperature which was 101° on the third day, with some vomiting and abdominal distention. This was relieved by the Levine tube, a compound enema and prostigmine. Following the enema, the bowels moved spontaneously daily, with relief of distention and cessation of vomiting. The gauze packing was removed gradually on the second and third days. The patient had very little discomfort. Vaginal examination on the fourth day showed slight serosanguinous discharge on the dressing. The vaginal orifice readily admitted one finger. Digitally, one could feel the barrel to the left and the septum between both barrels. The finger could be introduced for a distance of three inches without reaching the end of the canal. The lining of the canal felt velvety smooth, characteristic of the lining of the intestine.

Abdominal sutures were removed on the tenth day. The wound healed by primary union (Fig. 15). Temperature, pulse and respiration were normal. The patient felt comfortable, but had a very slight vaginal discharge, just enough to stain a napkin during the day. On digital examination the double-barreled canal was found patent, each barrel admitting one finger for a distance of three inches (Fig. 16). One could not feel the end of the barrel with the fingers, as it extended beyond the length of the finger.

Vaginal examination three weeks after operation showed the skin surface to be continuous with the intestinal mucous membrane now lining the vaginal canal. The canal admitted two fingers for a distance of about three inches. On vaginal examination four weeks after the operation, there appeared to be a good sphincter surrounding the vaginal opening, as is evidenced during an average vaginal examination.

The patient was instructed to use a pyrex test tube to maintain proper dilatation of the vaginal canal. It was started with a test tube one-half inch in diameter, progressing to one inch in diameter (Fig. 17). These were introduced for a distance of three to four inches with no discomfort, twice a day, and retained for about an hour at a time.

Five weeks after the operation the patient was readmitted to the hospital. She was prepared vaginally for the cutting of the septum between the two barrels of the vaginal canal see Fig. 14). Since the first operation, the ptum had receded about two inches up into he vaginal canal.

To visualize the width and depth of the vaginal canal, it was packed with a long strip of gauze soaked in a 10 per cent sodium iodide solution, to serve as an opaque medium for an X-ray examination. An X-ray of the pelvis was taken in an anteroposterior position. It revealed the length of the vaginal canal to be about four inches and its width about one inch (Fig. 18).

Under anesthesia, the partition between the two barrels of the canal was grasped between two clamps for a distance of two inches. The partition was cut across between the two clamps, thus transforming the two lumina into a single vaginal canal. The clamps were left *in situ* for two days. These were then removed. No bleeding ensued. The follow-up revealed a well formed vaginal canal of about the normal size and shape of that of an average female adult.

In the preceding case, the outstanding symptom that brought the congenital abnormality to our attention was the amenorrhea. Dysmenorrhea, likewise, may lead us to suspect some congenital abnormality of the internal genital tract.

Dysmenorrhea, or painful menstruation, has a variety of causes, ranging from those tangible forms where distinct pathology can explain the symptoms, such as obstruction of the cervical canal, inflammatory processes of the uterus and adnexa and neoplastic conditions, to those forms where one is inclined to blame some endocrine or neurogenic disturbance. No doubt, some congenital abnormalities may also be responsible for this disturbance.

SPONTANEOUS PERFORATION OF A DOUBLE UTERUS

This is the only case in our experience and to our knowledge, where there was a spontaneous perforation of a double uterus with the pathologic findings and clinical course as here outlined.

CASE REPORT

A girl, aged 22, gave the following history.

Family History.—As far back as she could remember, she was habitually constipated. She began to menstruate at the age of 13, every 28 days, lasting 4 to 5 days, with normal flow and without pain. A year later she began to suffer from severe lower abdominal pain and backache during her entire menstrual period. The pain would continue for about ten hours, with slight relief occasionally. This was a constant phenomena at every period. The pain was more marked on the right side. These symptoms recurred in the same form up to the age of 20. Since then, the pain would last for about two weeks continuously. The severity of the pain increased so greatly that the patient would become des-

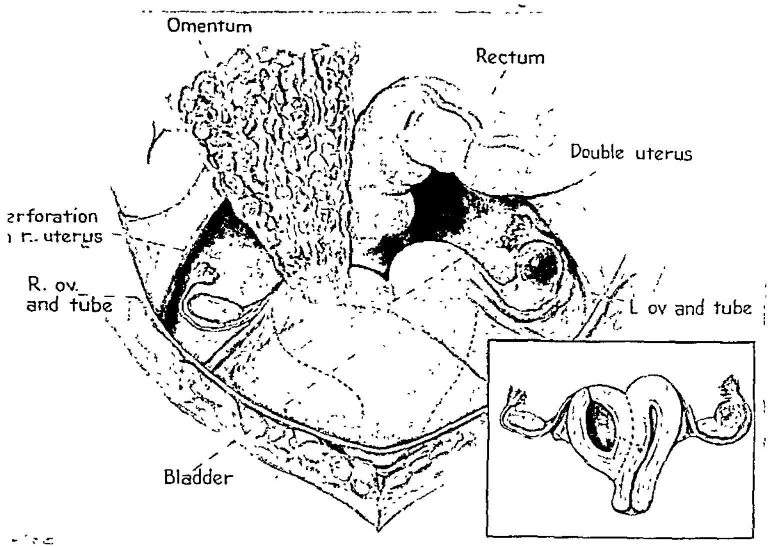

Fig. 19. Perforation of a double uterus. The right half of the double uterus is covered over by a patch of omentum, underneath which was found the perforation through which was escaping some old blood. The size and shape of the double uterus are indicated by the dotted lines, and by the cross section of the insert. The right uterus apparently has no external cervical opening. The only opening leading from its cavity is at its fundus which leads into the general peritoneal cavity, as seen on cross section. The right ovary is normal, the right tube is rudimentary, the left tube is normal, the left ovary contains a small cyst. The right half of the double uterus is removed as indicated by the dotted line on cross section. This was removed together with the rudimentary right tube. The cyst of the left ovary was removed, conserving its healthy portion.

perate in her attempt to relieve her suffering. She required sedatives in different forms to alleviate her pain.

The patient consulted me as to the advisability of performing an exploratory laparotomy and, if possible, to remove the cause. This I discouraged, because I felt there was nothing definite in the abdominal examination to justify such an exploration I suggested that she come back at a later date, after resorting to some therapeutic measures, such as organotherapy, etc. Two years later the patient returned. In view of the fact that all efforts for relief had failed, an exploratory laparotomy was performed.

Physical Examination.—Adult female, fairly well developed, mammary glands quite large and pendulous, chest and abdomen negative.

Vaginal Examination.—The urethra was found to be high up along the vaginal canal. The vaginal opening barely admitted a rubber catheter.

Operation.—On July 18, 1941, under spinal anesthesia, a median subumbilical incision about four inches long was made The peritoneal cavity was entered. A double uterus was found (Fig. 19).

The notch between the horns of the double uterus was about an inch deep and an inch wide, at its fundus. The right part of the double uterus was somewhat larger than the left, being about the size of a small tangerine. The anterior surface of the [illegible] part of uterus was covered by a patch of large omentum, not unlike a patch of adherent omentum one finds over a perforated ulcer of the stomach or a gangrenous appendix. The peritoneal reflection of the uterovesical pouch, as well as part of the fundus of the bladder, was also adherent higher up over the body of the uterus. When the omentum was separated from the uterus, a pin-point perforation was found in that portion of the uterus, through which one could observe the escape of some thin dark, bloody fluid. Both ovaries and the left tube appeared normal. The right tube was a mere thin solid cord, atrophic throughout, except the fimbrial end.

We proceeded to resect the right part of the double uterus. An incision was made in a wedge-shaped manner, along its anterior and posterior wall, excising the right half of the double uterus, without entering the left uterine cavity. The cut edges of the right border of the remaining uterus were sutured with superficial and deep continuous chromic 0 catgut, obtaining proper peritonealization d hemostasis.

he left ovary was found to contain a cyst size of a small plum. This was removed, nserving two-thirds of the normal ovary. The anomalous right tube was then removed, leaving the right ovary intact. On completion, the remaining uterus appeared to be of normal size and shape, except that its right border had a straight line and no cornu, because of the resection.

The appendix was found to be quite thickened and filled with fecaliths. To rule out the appendix as a possible cause of the abdominal pain, an appendectomy was also performed. During the entire procedure one could observe that the lumen of the small intestine was about one-third the normal diameter. The abdomen was closed in layers.

Gross and Microscopic Findings.—The removed uterus, on section, showed a wall about one inch thick; its cavity had the capacity of one dram. It contained old blood and clots. We could not locate with a probe either a cervical canal or a cornual opening. The pathologic report of the removed right half of the double uterus revealed, on microscopic section, fibromuscular structures arranged in interlacing bundles; the endometrium was in the proliferative phase.

Correlation of operative findings with the clinical course.—During the first year of her menses there was apparently not enough activity in the endometrium to cause distention of the obstructed right uterine cavity, which had no external outlet either through the cornu or the cervix. Later, the uterus became distended and caused pain which subsided after a week as the fluid was being absorbed. During the last few years, the distention became so marked as to cause a perforation of the anterior wall of the uterus. This, most likely, was followed by an escape of some bloody fluid into the peritoneal cavity with each menstrual period, which caused a more marked peritoneal reaction and prolonged the severe pain for two weeks, simulating tubal abortion. Nature attempted to close the perforation by the patch of omentum and even the reflection of the peritoneum and bladder.

Post-operative Course.—The patient made an uneventful recovery. The highest temperature was recorded two days following operation, when it reached 101°. The wound healed by primary union, and the sutures were removed on the ninth day. The patient was out of bed and walking on the tenth day. On the eleventh day (July 29th), the patient was discharged from the hospital.

Her next menstrual period was due August 1st, but was delayed until August 18th. She had no pain whatsoever in the accustomed site (on the right side). She did have some slight discomfort over the left lower part of the abdomen, but nothing like the pain of the previous menstrual periods. She continued to have her regular menstrual flow without pain on August 19th, 20th and 21st. Following this period she felt perfectly normal, with no sign of any discomfort. On September 16th, the patient had her second regular menstrual period since the operation. There was complete absence of the pain and discomfort experienced during her periods previous to operation. Her menses have since continued to be normal.

SUMMARY

Congenital abnormalities of the female genitalia are discussed from the embryologic, anatomic and physiologic stand-

points, and also from the clinical, psychologic and surgical aspects. The importance of a careful search for congenital abnormalities of the internal genitalia, when disturbances of their function are encountered, is stressed. Surgical relief for symptoms caused by these abnormalities is discussed. Two rare anomalies are reported:

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Anormalias congenitas de los organos genitales se estudian desde un punto de vista embriologico, anatomico y fisiologico y tambien desde un aspecto clinico, psicologico y quirurgico. La importancia de una cuidadosa búsqueda de anomalias de los genitales internos, cuando se encuentran trastornas de su funcion, es señalada. Se señala la mejoria obtenida en los sintomas causados por estos anomalias mediante la cirujia. Se reportan dos raras anomalias: (1) La ansencia de vagina, utero y trompas y (2) la espontanea perforacion de un utero doble.

RÉSUMÉ

Les anormalités congénitales des organes génitaux féminins sont étudiées du point de vue embryologique, anatomique et physiologique. L'auteur discute aussi les aspects cliniques, psycholoques et chirurgicoux. Il recommande un examen soigné afin d'établir ou d'exclure la presence d'anormalités congénitales des organes genitaux internes dans les cas de derangements de fonctions de ces organes. Les procédés opératoires employés dans les cas de cette nature sont discutés. Deux cas d'anormalités sont rapportés absence du vagin de l'utérus et de la trompe, perforation spontanée d'un utérus double.

Выводы

Урожденная уродливость половых органов описывается с эмбриологического, анатомического в физиологического пункта, причем автор трактует об ее клинической, психологической и хирургической характеристике. Подчеркивает необходимость исследовать наличие урожденной уродливости внутренних половых органов при присутствии неправильных функций. Автор описывает операции для облегчения симптомов и описывает две редкия аномалии: (1) неналичие влагительного канала, матки и труб; (2) спонтанная перфорация двойной матки.

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Nomenclatura y Clasificacion De Los Canceres

(Nomenclature and Classification of Carcinoma)

CONRADO ZUCKERMANN, M.D., F.I.C.S.
MEXICO, D. F.

SUMMARY

A new classification is presented, based upon embryologic, histologic and clinical findings, which definitely simplifies the nomenclature. The correct appreciation of the blastomas is stressed.

ES BIEN conocida la gran importancia del problema de los cancerosos en nuestro medio y dos hechos primordiales hacen necesario su estudio: el gran número de cancerosos existentes y la necesidad de contar con número suficiente de centros de diagnóstico y tratamiento con todos los medios para efectuar labor oportuna y apropiada.

El Departamento de Salubridad Pública de México ha establecido oficialmente la Campaña contra el Cáncer y ha invitado a médicos y público a colaborar con él en esta labor. En la actualidad ya se ha remitido a los profesionistas un folleto explicativo de la campaña y además se está tratando de fundar el primer dispensario anticanceroso con objeto de hacer llegar al público los beneficios de la campaña. Los señores doctores cuentan desde luego con servicio de examen histológico de todos los neoplasmas y fragmentos de neoplasma que remitan junto con la historia clínica correspondiente; para estas historias se les remiten esqueletos. Además se ha comenzado a enviarles folletos sobre asuntos de cancerología y se está efectuando labor de intercambio y cooperación.

Seguramente que para todos es evidente la conveniencia de contar con terminología y clasificación apropiada de los neoplasmas y este trabajo se refiere precisamente a procurar denominar y clasificar los neoplasmas en forma clara y precisa.

La clasificación y nomenclatura de los neoplasmas que presentamos está basado en los estudios embriológicos de Ochoterena, en los trabajos histológicos de Benítez Soto y en las observaciones clínicas de Zuckermann.

Desde luego es interesante señalar que a los neoplasmas histológicamente benignos los denominamos "omas" y están caracterizados por su limitación topográfica, es decir, se desarrollan en un sitio sin emigrar de él y aún presentan en algún caso cápsula limitante o por lo menos plano de separación entre el tumor y el tejido sano.

Las reproducciones celulares son raras, es decir, que su crecimiento efectuándose en forma normal, aunque en mayor grado, no permite encontrar en las preparaciones muchas figuras mitósicas sino por el contrario se observan estas raramente, además. No existen atipias celulares ni monstruosidades y el tejido que los constituye es muy semejante al que les ha dado origen.

Los "blastomas," neoplasmas histológicamente malignos, se caracterizan por su no limitación, es decir, que las celdil-

OMAS: NEOPLASMAS HISTOLOGICAMENTE BENIGNOS.
BLASTOMAS: NEOPLASMAS HISTOLOGICAMENTE MALIGNOS.

CARACTERISTICAS FUNDAMENTALES.

OMAS
- LIMITACION TOPOGRAFICA.
- REPRODUCCIONES CELULARES RARAS.
- AUSENCIA DE MONSTRUOSIDADES Y ATIPIAS CELULARES.

BLASTOMAS
- NO LIMITACION.
- FRECUENTES REPRODUCCIONES CELULARES.
- EXISTENCIA DE MONSTRUOSIDADES Y ATIPIAS CELULARES.

las blastoma tosas emigran en los intersticios celulares invadiendo los tejidos cercanos, no existiendo plano de separación entre tumor y tejidos sanos y mucho menos cápsula y además emigran a sitios lejanos por las vias linfática y sanguínea. Existen frecuentes reproducciones celulares que se hacen ostensibles en los cortes histológicos. Además las celdillas blastomatosas aún pareciendose a los del tejido que les dió origen presenta monstruosidades y atipias celulares que marcan claras diferencias entre el tejido normal y el canceroso.

Los tejidos normales se clasifican en cinco sistemas fundamentales: epitelial, mesenquimoconjuntivo, muscular, nervioso y gonocitario. Las neoplasias de cada uno de estos sistemas constituyen los cinco grupos fundamentales de tumores.

Los neoplasmas del tejido epitelial se denominan epiteliomas si son histolégicamente benignos y epitelioblastomas si son histológicamente malignos y según su origen se dividen en: de revestimiento mucoso o cutaneo y glandulares. Además existen los adamantinomas y adamantinoblastomas derivados de la lámina dentaria que forma los botones dentarios u órganos adamantinos, que es de origen epitelial; se constituyen así esa categoría especial de neoplasmas de las mandíbulas.

NEOPLASMAS
- EPITELIALES.
- MESENQUIMOCONJUNTIVOS.
- MUSCULARES.
- NERVIOSOS.
- GONOCITARIOS.

Los neoplasmas derivados del sistema mesénquimoconjuntivo pueden ser de los siguientes tejidos: conjuntivo fundamental, mucoso, adiposo, cartilaginoso, óseo, melánico, linfoide, mieloide, endotelial hemático, endotelial infático y endotelial seroso y así existen:

Fibromas y fibroblastomas.

Mixomas y mixoblastomas.

Lipomas (el tejido adiposo no da lugar a la formación de blastomas).

Condromas y condroblastomas.

Osteomas y osteoblastomas.

Melanoblastomas el tejido melánico no da lugar a la formación de omas).

Linfomas y linfoblastomas.

Mielomas y mieloblastomas.

Hemangioendoteliomas y hemangioendotelioblastomas.

Linfangioendoteliomas y linfangioendotelioblastomas.

NEOPLASMAS EPITELIALES
- EPITELIOMAS Y
- EPITELIOBLASTOMAS
  - DE REVESTIMIENTO
    - MUCOSO
    - CUTANEO
  - GLANDULARES.
- ADAMANTINOMAS Y
- ADAMANTINOBLASTOMAS.

- NEOPLASMAS MESENQUIMO-CONJUNTIVOS
  - DEL CONJUNTIVO FUNDAMENTAL
    - FIBROMAS Y FIBROBLASTOMAS.
  - DEL TEJIDO MUCOSO
    - MIXOMAS Y MIXOBLASTOMAS.
  - DEL TEJIDO GRASOSO
    - LIPOMAS.
  - DEL TEJIDO CARTILAGINOSO
    - CONDROMAS Y CONDROBLASTOMAS.
  - DEL TEJIDO OSEO
    - OSTEOMAS
    - OSTEOBLASTOMAS.
  - DEL TEJIDO MELANICO - MELANOBLASTOMAS.
  - DEL TEJIDO LINFATICO
    - LINFOMAS Y LINFOBLASTOMAS.
  - DEL TEJIDO MIELOIDE
    - MIELOMAS Y MIELOBLASTOMAS.
  - DEL ENDOTELIO VASCULAR SANGUINEO
    - HEMANGIOENDOTELIOMAS Y HEMANGIOENDOTELIOBLASTOMAS.
  - DEL ENDOTELIO VASCULAR LINFATICO
    - LINFANGIOENDOTELIOMAS Y LINFANGIOENDOTELIOBLASTOMAS.
  - DEL ENDOTELIO DE LAS SEROSAS
    - SEROENDOTELIOMAS Y SEROENDOTELIOBLASTOMAS.

- NEOPLASMAS MUSCULARES
  - DE LAS FIBRAS ESTRIADAS
    - RABDOMIOMAS Y RABDOMIOBLASTOMAS.
  - DE LAS FIBRAS LISAS
    - LEIOMIOMAS Y LEIOMIOBLASTOMAS.

Seroendoteliomas y seroendotelioblastomas.

En el tejido conjuntivo y sus afines pueden observarse como en otros tejidos o con otros tejidos, neoplasmas mixtos, constituídos por dos o más tejidos en crecimiento anormal: osteocondromas, osteocondro-blastomas, fibro-mixomas, fibro-epitelioblastomas, etc.

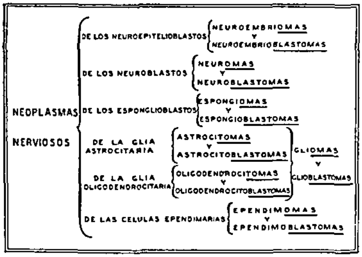
Los neoplasmas derivados del sistema [illegible], si son del tejido muscular liso, son leiomiomas y leiomioblastomas, y si son derivados de las fibras musculares estriadas, son rabdomiomas y rabdomioblastomas.

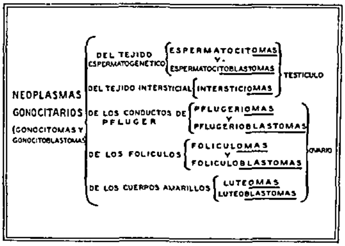
Los neoplasmas del sistema nervioso se clasifican de acuerdo con el origen embriológico de las celdillas de donde se derivan. Estudiando el desarrollo del tejido nervioso se sabe que éste deriva de la capa ectodérmica y que a las celdillas germinativas del tejido nervioso se les denomina neuroepitelioblastos. Estos neuroepitelioblastos, al desarrollarse pueden hacerlo hacia celdillas que van a formar neuronas o hacia celdillas que van a formar los tejidos de sostén de las mencionadas neuronas. A los primeros se les denomina neuroblastos y al evolucionar dan origen a las neuronas; a los segundos se les da el nombre de espongioblastos y pueden evolucionar a su vez en dos sentidos, es decir, hacia glioblastos, que dan origen a las celdillas gliales a gliocitos, y a ependimoblastos, que dan origen a las celdillas ependimarias o ependimocitos.

Tendríamos a través de la evolución embriológica del sistema nervioso: neuroepitelioblastos, neuroblastos y neuronas, espongioblastos, glioblastos y gliocitos, ependimoblastos y ependimocitos.

Las neuronas no son capaces de dar origen a tumores dado que carecen de función reproductora, pero los neuroblastos que les preceden sí son capaces de dar origen a neoplasias. Tomando en cuenta lo antes anotado, tendremos las diversas categorías de neoplasias derivadas del tejido nervioso: de los neuroepitelioblastos derivan los neuroembriomas y neuroembrioblastomas.

De los neuroblastos derivan los neuromas y neuroblastomas; los espongioblastos dan origen a la formación de espongiomas y espongioblastomas. Las celdillas gliales, glioblastos y gliocitos, constituyen estructuralmente dos clases de glía: la astrocitaria y la oligodendrocitaria, y así tendremos dos categorías de neoplasmas derivados: los astrocitomas y astrocitoblastomas, y los oligodendrocitomas y oligodendrocitoblastomas, formando estas cuatre categorías de tumores parte del grupo de gliomas y glioblastomas. De los ependimoblastos y ependimocitos derivan los ependimomas y ependimoblastomas.





No debe olvidarse que los neuromas y neuroblastomas, gliomas y glioblastomas pueden ser centrales, es decir, localizadas en el eje cerebroespinal, o periféricas, localizados en el sistema nervioso periférico. Los neoplasmas derivados del sistema gonocitario, reciben el nombre genérico de gonocitomas y gonocitoblastomas. El sistema gonocitario comprende, el tejido espermatogenético, el ovogenético y el intersticial. Las neoplasias derivadas del tejido espermatogenético si son histológicamente benignas reciben el nombre de espermatoci tomas, y si son malignas, el de espermatocitoblastomas (seminoblastomas, de la terminología antigua).

Los derivados del tejido intersticial, casi siempre son histológicamente benignos, y se denominan intersticiomas. Las neoplasias ovogenéticas, según su origen, se denominan pflugeriomas y pflugerioblastomas, si son derivadas de los tejidos de Pfluger; foliculomas y foliculoblastomas si son derivadas de los folículos; luteomas y luteoblastomas si son derivadas de cuerpos amarillos.

Aparte debemos considerar los neoplasmas desarrollados por transformación de tejidos embrionarios o placentarios que pueden ser: embriomas y embrioblastomas, placentomas y placentoblastomas (el llamado corio-epitelioblastoma).

En presencia de alguna variedad de oma o blastoma que parezca no estar incluída en la clasificación anotada, deberá estudiarse su estructura histológica y su origen embrionario y determinar entonces a cuál sistema tisular pertenece o si es embrionario.

SUMARIO

La clasificación antes anotada, basada en hechos embriológicos, histológicos y clínicos, simplifica indudablemente la nomenclatura y correcta apreciación de los blastomas y tiene por objeto aclarar problema tan difícil y uniformar la denominación y la colocación en patología y en clínica de los tumores.

RÉSUMÉ

L'auteur présente une nouvelle classification basée sur les données embryologiques, histologiques et clinique. Cette classification simplifie la nomenclature. Une appréciation exacte des blastomes est préconisée.

Выводы

Автор предлачает новую классификацию основанную на ембриологических, гистологических и клинических данных. Она облегчает номенклатуру. Подчеркивается правильная оценка бластомы.

Closure of Incised and Lacerated Skin Wounds with Report of Case of Closure of Avulsion of the Scalp*

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CLEAN cut incisions of the skin or wounds accidentally made with sharp edged instruments produce gaping from the elasticity or contractility of the tissue divided. Skin, which is the most elastic tissue in the body, retracts far more than other tissues, and transverse wounds of the skin gape more than those which are longitudinal. Exceptions to the rule are noticed in tissues of wounds of the palm of the hand and the sole of the foot. These never gape on and disappear in a few days.

Healthy skin tissues that are highly vascular undergo rapid and perfect repair when incised. In the margin of the wound the blood coagulates to the nearest anastomosis, and the capillary vessels dilate by the increased pressure to which they have been subjected. The coagula become reabsorbed. The capillary meshes on the one side join, by loops projected through the new tissue, similar meshes of the opposite side with result-

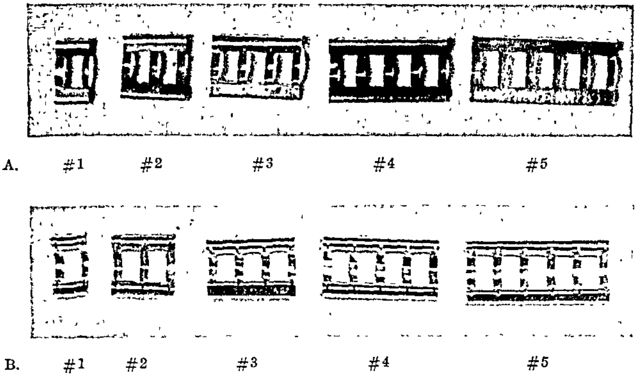


Fig. 1.(A) Anterior view of wound clips. (B) Posterior view.

strument, but causes pain in its removal. It often necessitates digging into the skin before it is lifted out with the instrument.

To overcome such discomfort, I have devised a multiple clip with bolsters which can be applied to the severed edges of the skin on any part of the body—head, trunk or limbs—anteriorly or posteriorly. These clips can be quickly fastened to the edges of the wound with the hand. Bolsters in the clips have special value by holding the edges close together and preventing capillary oozing.

Pressure by the bolsters on the deeper tissues obliterates dead space from forming so that no fluid or blood can collect. Fine spiculæ connect the clips to the superficial layer of the skin. No suture material is used. Infection is not carried into the subdermic space. Stitch abscess is avoided. Primary union invariably follows. In adiposed patients retention sutures are inserted before applying the clamps.

At the Unity Hospital during the past two years, these clips were applied on incised and lacerated skin of over 800 patients with excellent results. The clips stay on the wound six to eight days. On their removal the scar is fine and in many cases like a hair-line. They are removed painlessly, often as a surprise to the patient. The bolster bars are hollow, so that by inserting a small hemostat in the canal at each end and spreading the clamps laterally about a quarter of an inch, the spiculæ unfasten from the skin and the clips fall off. The clips are made of nickelsilver, are light, smooth, thin and pliable. They are sterilized the same as other instruments and can be used again many times. They can also be used as towel clips instead of towel instruments.

DESCRIPTION

The multiple metal clips consist of two lateral triangular hollow bars which serve as bolsters on each side of the wound and extend parallel to the edges thereof. Sharp, small spiculæ are projecting from the bolster bars which enter the superficial layer of the skin, and when pressed together [illegible] the [illegible] or an instrument, they [illegible] tate the wound without injuring the tissues.

The lateral bars or levers are interconnected with soft, bendable metal webs, one-half inch apart. The clip is left in this position holding tightly the edges of the skin and tissues until the wound is healed.

Several of the clips may be placed one next to the other, leaving one-half inch interspace between them, to cover any length of wound. The clips can be applied on the scalp, neck, chest, abdomen, perineum and limbs where coaptation of the skin wound is necessary (Fig. 1).

backwards, and there remained resting on the nape of the neck. The periosteum was not removed. She had bled profusely and was in a state of shock on admission; 1500 units of anti-tetanus serum were injected.

Laboratory Reports.—Blood: R.B.C. 3,770,000; W.B.C. 14,400; Hb. 76 (Sahli).

Differential: Polymorphonuclear leukocytes 88; Lymphocytes 12.

Urine: Negative, except for a slight trace of albumen.

Examination.—The patient is dazed. She responds to questions fairly well but sluggishly. The edges of the lacerated scalp are bleeding. The skull is exposed from the forehead to the occipital part. No anesthesia given.

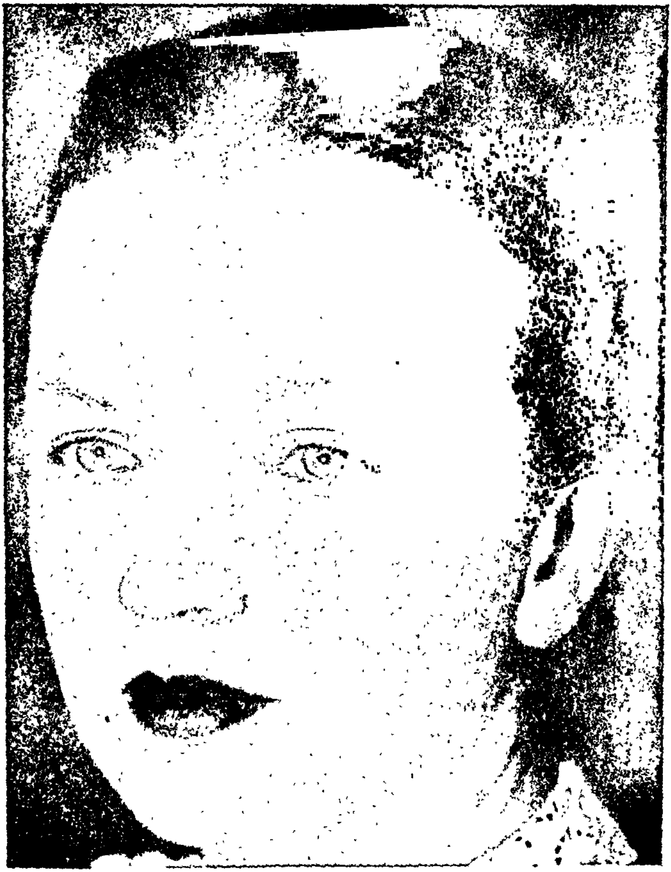


Fig. 2. Avulsion of scalp, showing primary union after removal of clips.

ridges acting as wedges which caused the cleavage.

Generally, the entire scalp to the level of the ears is torn away (one or both ears are lost in some cases). The defect usually ceases at the hair line of the neck. Cushing states that it is apt to run down on to the center of the neck in a "V" shape. The scalp separates from the temporal muscles, leaving them intact.

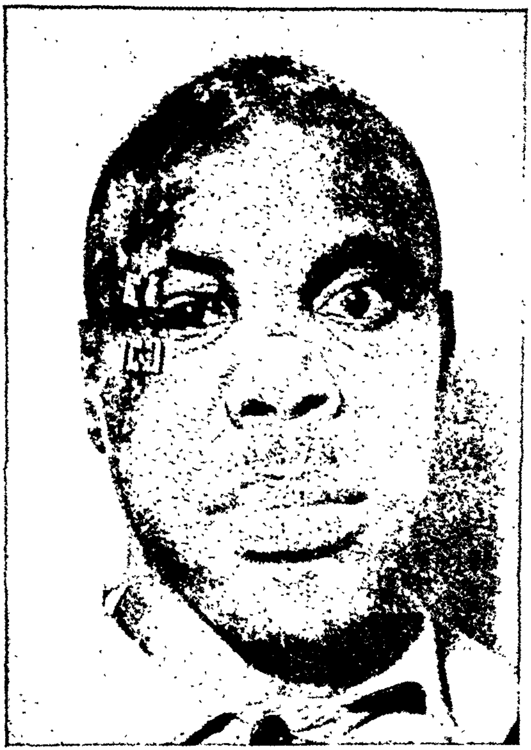


Fig. 3. Stab wound of face with clips in place.

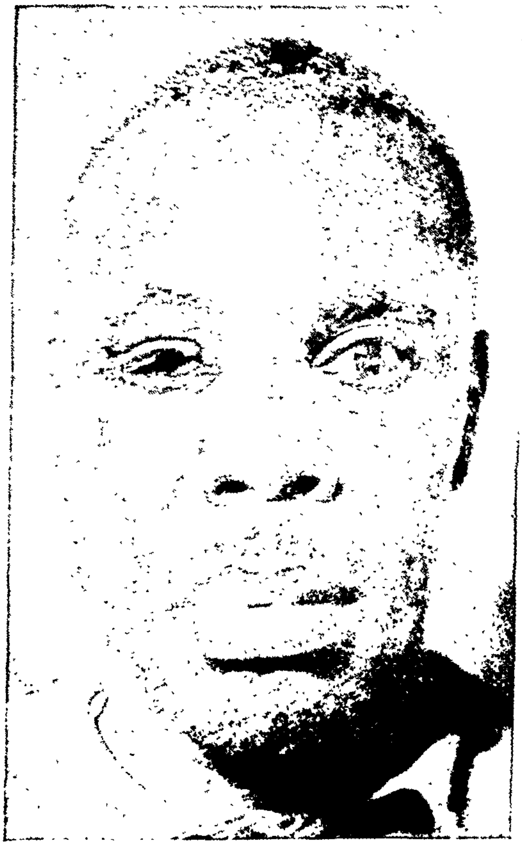


Fig. 4. The same patient after removal of clips.

The bellies of the occipito-frontalis are generally taken with it.

Hemorrhage is profuse, often requiring ligation of the blood vessels. Shock is profound. Death may occur from hemorrhage or other injuries. Primary pain is moderate, but later may be excruciating.

In complete avulsion, stitching the avulsed scalp back over the defect results in failure. Cutting the scalp into strips and grafting it as such was also reported as failure. Plastic sliding operations are reported where a flap from the neck or side of the face with pedicle attached has been used to cover the brow or a part of the cranium.

Where avulsion was not complete, but the vertex was denuded, four concentric flaps from the edges of the scalp were cut, slit across the wound and united, making a cross of scalp, the defects between the arms of which were grafted in other ways. Davis used whole thickness grafts after the method of Wolfe-Krause, with complete success. The greatest number of wounds have been healed by the Thiersh method of autogenous grafts with the best results.

In three cases in conjunction with Thiersh grafts, amniotic membrane, both from the sac and the cord near the fetus, was used (method of Stern) to cover small granulating areas. Two of them took, the third sloughed (Figs. 3-6).

SUMMARY

The object of the multiple wound clips is to eliminate the use of stitches for uniting the incised or lacerated skin and to hold together tightly and firmly the

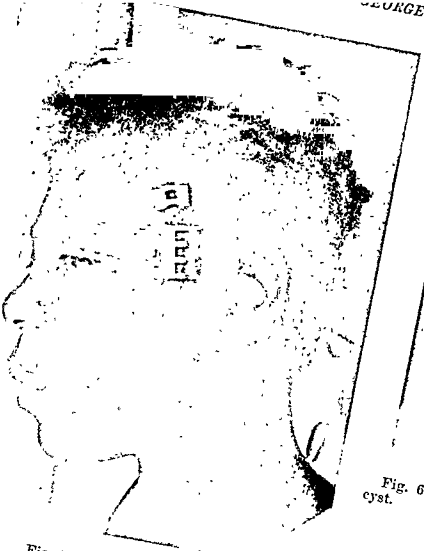


Fig. 5. Laceration of temple.

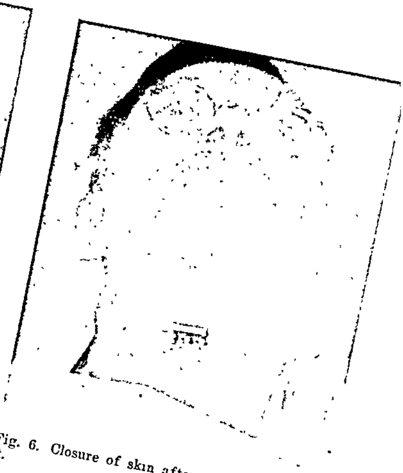


Fig. 6. Closure of skin after removal of bronchial cyst.

torn or cut edges until the wound is healed. The construction of the wound clips prevents strangulation of the tissues, obliterates gaping or dead spaces, and avoids capillary bleeding. Needless suture material is entirely eliminated, and stitches, by their absence, will not cut out. Infection or stitch abscess, from part of a stitch left in the wound, is prevented.

The wound clips facilitate quick closing of the wound, thereby lessening the time period during which the patient is under anesthesia. Pain and mental anguish are eliminated during the removal of the stitches. Sterilization of the metal clips is less apt to bring stitch infection than suture material, which may carry skin bacteria into the deeper tissues. The blood vessels are not punctured, and clean raw edges of a wound neatly approximated and firmly held together with bolstered clips result in primary union (Figs. 7-9).

Drains are no barriers to the clips, and no skin suture material is necessary. Leukocytic reaction is avoided by the use of the clips, and they eliminate the possibility of foreign material being left in

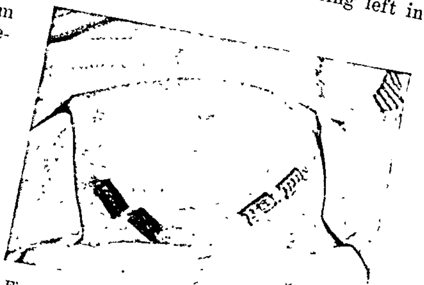
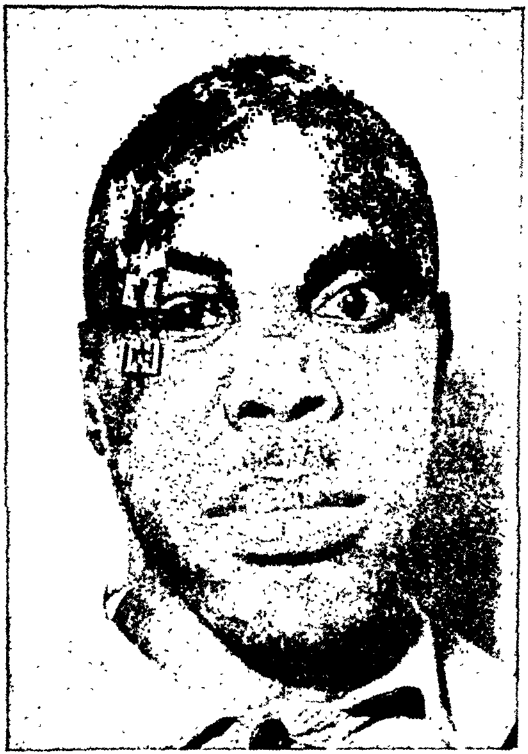


Fig. 7. Skin closure after bilateral hernia operation.



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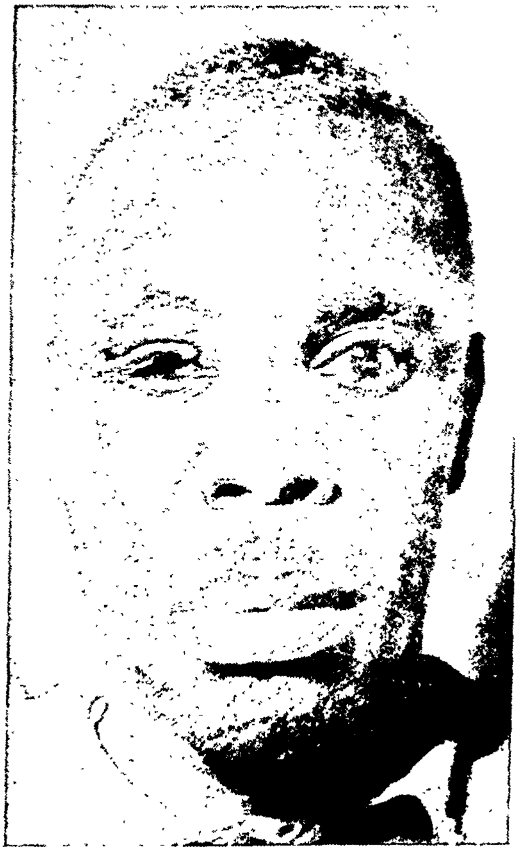

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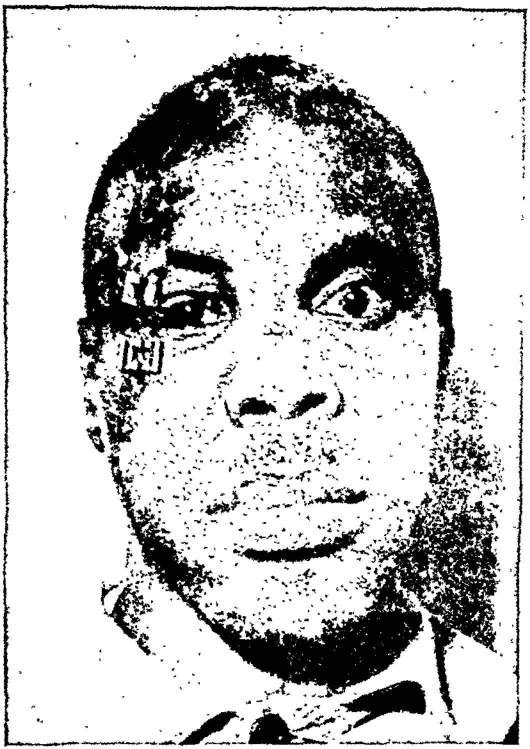

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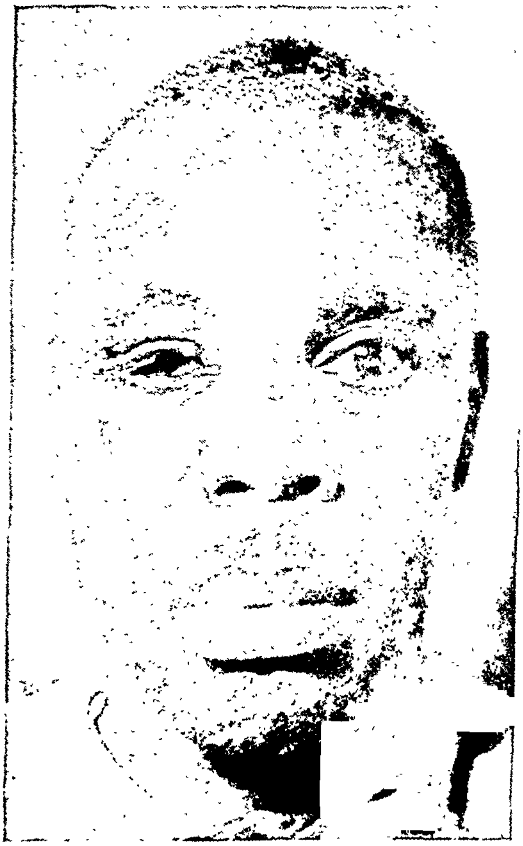

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hémorrhagies capillaires. Elles dispensent de l'emploi d'aiguelles et de matériel de suture et préviennent toute infection des points de suture. Ces agrafes facilitent la fermeture rapide de la plaie; l'anesthésie du malade est ainsi abrégée. L'enlèvement des agrafes est indolare. Leur stérilisation est facile et leur insertion est moins apte à infecter les tissus profonds. Les vaisseaux sanguins ne sont point ponctionnes et leur emploi obtient une apposition des bords de la plaie, facilitant ainsé l'uniòn par première intention.

Les drains n'offrent aucune barrière à l'emploi des agrafes. La réaction leucocytaire et l'élimination de matériel étranger abandonné dans la plaie ne surviennent pas. L'apport sanguin la nutrition des tissus et la guérison ne sont aucunement dérangés et les tissus ne sont pas traumatisés. Pour la fermeture rapide des lacérations superficielles, ces agrafes sont d'une grande utililé. Dans les cas urgents les infirmiers et les gardes—maládes peuvent les insérer.

Выводы

Конструкция мишелевских "clips" такова, что они не удавливают ткани, причем удаляются мертвые пространства и капиллярное кровотечение. Иголки и шейный материял исключаются. Таким образом невозможно развитие човного абцеса. Зашивание раны берет меньше времени, сокращая время операции. Боли и боязныболи при удалении их не бывает. Избегаются уколы сосудов и рана живо заживает пар prімам. Можно дренировать. Левкоцитарная реакция отсутствует. Эти "clips" легко и быстро накладываятются, что должно быть выгодным на поле битвы.

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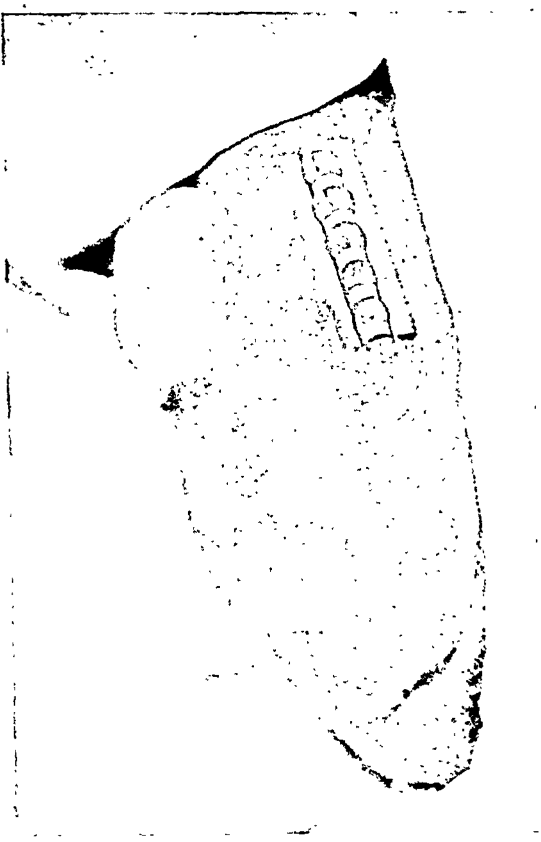

g. 8. Skin clip in place after hydrocele operation.

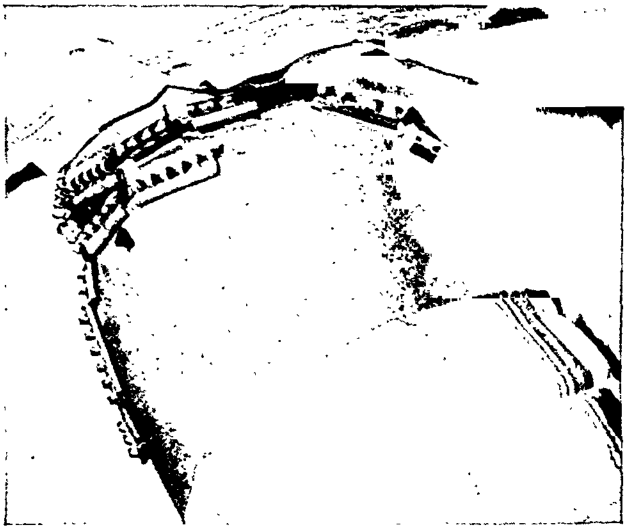

Fig. 9. Closure of extensive laceration of groin and thigh.

the wound. The blood supply, nutrition and healing are not disturbed, and the tissues are not traumatized.

For rapid closure of surface lacerations on the field of battle, these clips are most valuable, as nurses and orderlies can apply them during emergencies.

SUMARIO

El objeto de la presilla multiple es eliminar el uso de suturas para mantener unidas firmemente los bordes, hasta que la herida esté sana.

La construccion de la presilla multiple previene la estrangulacion de los tejidos, oblitera los espacios muertos y evita la hemorragia capilar. Agujas y material de sutura son completamente eliminados. Infeccion o abscesos por parte de alguna sutura abandonada en la herida, es evitado. Se facilita el rapido cierre de la herida, disminuyendo el tiempo de anestesia.

Se eliminan molestias al enfermo en el momento de retirar las suturas. La esterilizacion de las presillas hace mas seguro la prevencion de infeccion, que usando material de sutura. Los vasos sanguineos no son lesionadas y bordes limpios y firmemente sujetos facilita union por primera intencion.

Las presillas no interfieren el uso de drenage. Se previene la reaccion leucocitaria. La circulacion y nutricion no son alteradas y los tejidos no son traumatizados. Para el rapido cierre de heridas en el campo de batalla la presilla es mas util, pudiendo en casos de emergencia ser aplicados por enfermeras y asistentes.

RÉSUMÉ

Les agrafes metalliques élimine l'emploi de sutures pour effectuer l'union des marges des plaies cutanées. Les bords de la plaie sont maintenus en contact Jusqu à la guerison. Les agrafes n'étranglent pas les tissus; elles oblitèrent les espaces vides et empêchent les

hémorrhagies capillaires. Elles dispensent de l'emploi d'aiguelles et de matériel de suture et préviennent toute infection des points de suture. Ces agrafes facilitent la fermeture rapide de la plaie; l'anesthésie du malade est ainsi abrégée. L'enlèvement des agrafes est indolare. Leur stérilisation est facile et leur insertion est moins apte à infecter les tissus profonds. Les vaisseaux sanguins ne sont point ponctionnes et leur emploi obtient une apposition des bords de la plaie, facilitant ainsé l'uniòn par première intention.

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Experiences with the Bacon Operation for Femoral Hernia

A. J. MENDILLO, M.D., F.I.C.S., F.A.C.S.
NEW HAVEN, CONNECTICUT

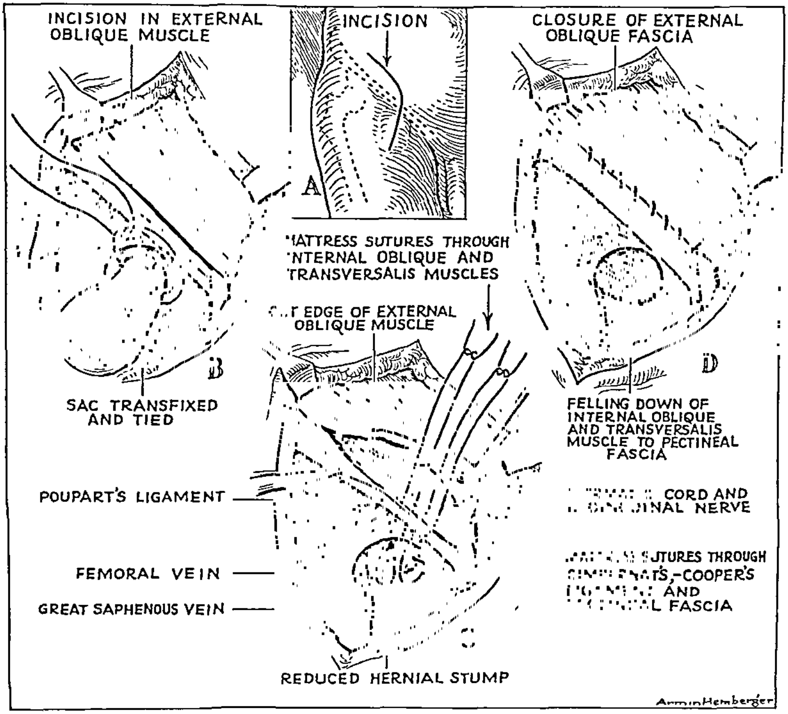
THE *first step* in the operation begins at a point two inches from the pubic spine, and three-quarters of an inch above Poupart's ligament. An incision is then made, passing first inwards, parallel to Poupart's ligament, as far as the hernia, or as far as the situation of the femoral canal, thence turning downwards, in the line of the axis of the leg, over the hernial sac to its lower border (Fig. 1, A).

The *second step* consists in carefully "preparing" the anterior surface of the aponeurosis of the external oblique muscle in the upper part of the incision for a full inch from its reflected border.

The *third step* involves the isolation of the hernial sac, and the return of its contents to the abdominal cavity. The hernial sac is drawn down, out of the abdominal cavity, for a considerable distance, freed of its sub-peritoneal fat, and opened. The hernial contents are examined and given appropriate treatment, according to their condition of viability or otherwise, the sac is then transfixed, ligated as high as possible, and dropped back (Fig. 1, B).

The *fourth step* of the operation consists in thoroughly cleaning up the pectineal fascia in the upper part of the fossa ovalis, and removing all the fat and the loose connective tissue from the femoral canal. In doing this the crural vein must be positively identified.

For the *fifth step* in the operation, an incision is made in the aponeurosis of the external oblique muscle in the direction of its fibres, and about three-quarters of an inch above Poupart's ligament. The incision is extended from a point well over the femoral vessels externally, to a point internal to the free edge of Gimbernat's ligament, which has been uncovered in cleaning out the femoral canal and in preparing the pectineal fascia and the fossa ovalis, and is easily identified by the finger in the canal. When the incision has been made in the aponeurosis, the underlying internal oblique and transversalis muscles and the transversalis fascia should be gently separated from Poupart's ligament with the handle of the scalpel, and the "trough" of this structure emptied, as it were, of its muscular contents, as far as the incision in the aponeurosis extends. In doing this it is necessary to be careful not to "shred" the aponeurosis, either at the edge along the incision, or along the border of its reflected portion, but the free edge of the reflected portion should be gently detached from its not very intimate connection with the anterior surface of the transversalis fascia. When this step has been carried out properly, Poupart's ligament lies stretched in its normal position, as the chord of the arc, running from the anterior superior spine of the ileum directly to the pubic spine; while the internal oblique and the transversalis muscles and the transversalis fascia, now no longer supported by Poupart's ligament,


INCISION IN EXTERNAL OBLIQUE MUSCLE
INCISION
A
CLOSURE OF EXTERNAL OBLIQUE FASCIA
MATTRESS SUTURES THROUGH INTERNAL OBLIQUE AND TRANSVERSALIS MUSCLES
CUT EDGE OF EXTERNAL OBLIQUE MUSCLE
B
SAC TRANSFIXED AND TIED
D
FELLING DOWN OF INTERNAL OBLIQUE AND TRANSVERSALIS MUSCLE TO PECTINEAL FASCIA
POUPART'S LIGAMENT
SPERMATIC CORD AND ILIOINGUINAL NERVE
FEMORAL VEIN
MATTRESS SUTURES THROUGH GIMBERNAT'S,-COOPER'S LIGAMENT AND PECTINEAL FASCIA
GREAT SAPHENOUS VEIN
REDUCED HERNIAL STUMP
ArminHemberger

almost sag of their own weight, to lie against the horizontal ramus of the pubic bone, along the pecten ossis pubis.

The *sixth step* in the operation consists in fastening these muscles in their new position with appropriate sutures. As there is no tension upon these sutures, and since they serve to unite well vascularized tissues, rather than purely fibrous or tendinous ones, fine chromicized catgut can be used with perfect security, or other material may be substituted, if preferred. The sutures should be placed with a small, full-curved, stout needle (Martin's needle is best). The most important stitch, that next to the vein, should be placed first, as close as possible to the crural vein, the vessel being pressed outwards by the left forefinger while the needle is being introduced (Fig. 1, C).

The needle should be entered into the muscle, about one-half inch from the border, which has just been detached from Poupart's ligament, being introduced through the incision in the aponeurosis, taking pains not to pick up any of the fibres of this structure, and should be made to pass through the internal oblique muscle, the transversalis muscle and the transversalis fascia (it pierces the fascia in the region of the "femoral girdle"). Having passed through the fascia, the point of the needle is made to dip down in the subserous space, between the transversalis fascia and the peritoneum (the latter membrane being pushed out of the way by the left forefinger in the femoral canal) into the true pelvis. The point is then carried forward, towards the fossa ovalis, and pierces first that portion of the transversalis fascia which lines the true pelvis, *i.e.*, the pelvic fascia; next the fibres of Cooper's ligamentum pubicum (this ligament forms, as already stated, the chief anchor for the stitches), then the initial fibres of the pectineus muscle, and finally the pectineal fascia lying upon this muscle, to emerge in the floor of the fossa ovalis, just at the level of the lower edge of oupart's ligament. It re-enters the or of the fossa ovalis close to where it emerged, and should be carried back parallel to its first course, burying itself as deeply as possible, to emerge on the anterior surface of the internal oblique muscle and pass out through the incision in the aponeurosis, thus completing a mattress-suture (Fig. 1, C).

The ends should be cut long and left untied until two or, in some cases, three similar mattress-sutures are pased parallel to it, when all should be tied. These mattress-sutures are now reinforced by a row of single sutures, hemming or, perhaps more correctly in seamstress's parlance, "felling" down the curled-up free edge of the muscles to the pectineal fascia (Fig. 1, D). In this way a flat, muscular surface, of considerable extent, consisting of fibres having diverse origins and so supporting different stresses, is broadly and firmly secured, almost without tension, upon the surface of the horizontal ramus of the pubic bone. The femoral canal is completely obliterated, and inasmuch as only a negligible amount of tension is necessary to bring the muscles to their new position, the first, or the most external, mattress-suture can be passed close to the wall of the crural vein without danger of occluding its lumen, owing to the yielding and elastic character of the tissues held down by the sutures.

The *seventh step* is very simple and consists merely in suturing the incision in the aponeurosis with very fine plain catgut, taking care that the needle shall enter and emerge very close to the edges, and that the suture, which should be continuous, is not drawn tight enough to raise a ridge. There is absolutely no tension on this suture, which is applied only to prevent possible accidental gaping of an incision whose edges tend to fall together spontaneously (Fig. 1, D).

The *eighth, and final, step* in the operation consists in closing the cutaneous incision with interrupted sutures of fine silkworm gut.

SUMMARY

Femoral hernia is a common condition in females, but not uncommon in males. Most operative procedures for its repair fail to obliterate the femoral canal at the abdominal end, consequently the high percentage of recurrences. The Bacon technic obliterates the abdominal end of the femoral canal with the use of live muscle tissue without tension. It does not require a difficult technic, and can be performed at all ages and in the face of any complication which might arise in hernias. It is the only hernia operation I know of which produces almost 100 per cent cures. During the 32 years in which I have performed this operation I have never seen a recurrence.

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SUMARIO

La hernia femoral es frecuente en la mujer y no infrecuente en hombres. Muchos procedimientos operatorios tratan de obliterar el canal femoral, y por consecuencia el alto porcentage de recidivas. La tecnica de Bacon oblitera el extremo abdominal del canal femoral usando tejido muscular vivo sin tension. No requirere una tecnica dificil, y puede ejecutarse en todas las edades y para cualquier complicación que pueda presentarse en hernias. Es la única operacion *de hernia que conozco, que pueda* dar casi un 100 por ciento de curacion, y duranto los 32 años en que he estado ejecutando esta operacion nunca he visto una recidiva.

RÉSUMÉ

La hernie fémorale est fréquente chez la femme et n'est pas rare chez l'homme. Beaucoup des procédés opératoires employés pour la guérison de cette condition ne ferment pas l'extrémité abdomínale du canal fémoral; il en résulte un haut pourcentage de récidives. La technique de Bacon oblitère l'ouverture ab*dominale du canal fémoral par l'emploi* de tissu musculaire vivant. La technique n'est pas difficile et est applicable à tous les cas. L'auteur nous assure que cette technique obtient une guérison permanente dans presque cent pour cent de *tous les cas.*

Выводы

Феморальная грыжа встречается часто у женщин и не так редко у мужчин. Большенство оперативных процедур не успевает ликвидировать феморальный канал в его абдоминальной оконечности, по поводу чего и происходит большой процент неудач. Техника Бейкона позволяет облитерировать абдоминальную оконечность феморального канала, употребляя живой мускул без натяги. Техника совершенно не трудная и употребляется в каком бы не было возрасте и при каком бы то ни было осложенении. Это единственная операция дающая чуть-ли не 100 процентов успешных результатов. В течении 32 лет моей практики я не испытал единственной неудачи при употреблении этой операции.

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Double Appendix or Solitary Cecal Diverticulum?

RICHARD M. LEONARDO, M.D., CH.M., F.I.C.S.
ROCHESTER, NEW YORK

THE occurrence of a double appendix or of a solitary cecal diverticulum being rare, additional cases may well be reported and attention called to the possible danger of an erroneous diagnosis.

A woman, aged 29, was admitted to the Rochester General Hospital on August 12, 1942, with a history of lower abdominal pain. Bimanual examination revealed a mass the size of an orange in the left pelvis, which I diagnosed as an ovarian cyst. The rest of her history and her physical examination were irrelevant.

At operation, through a midline incision, I found the mass was an intraligamentous cyst, which I carefully enucleated in the routine manner. The pelvis was filled with adhesions, which were not disturbed. A chronic salpingitis with hydrosalpynx was present on the right side and this was removed. A routine appendectomy was then done. Since I was working on the left side of the patient, my assistant removed the appendix. In picking up the cecum I remarked that the meso-appendix contained a mass the size of a large kidney bean, which felt like a phlebolith. I promptly forgot about it and did not notice when the meso-appendix was severed that my assistant had cut open the tip of the mass. The appendix was removed and the stump ligated in the usual manner, and then as we were about to drop the cecum into the abdominal cavity and begin to close the midline suprapubic incision, I noticed a fecal speck on the cecum, one-quarter inch from the ligated appendiceal stump. I removed this with a bit of gauze and then observed an apparent opening beneath it. Gently pressing on this with a thumb forceps, I expressed a very narrow column of fecal material about the diameter of the lead in an average pencil. I then realized that this was a diverticulum or a double appendix springing from the cecum and enclosed within the folds of the meso-appendix, and that it had been accidentally opened just at its tip while the meso-appendix was being cut through during the course of the routine appendectomy. I directed my assistant to carefully ligate the stump (about one-half to two-thirds inch long) and then a combined ligature was placed about the stumps of the two appendices and the abdomen closed in layers. The patient made an uneventful recovery.

One month later, upon the arrival of our new pathologist, he was unable to find the severed tip of the second appendix or diverticulum, because the preserved gross specimen had been destroyed after the routine waiting period of two weeks, since it is customary to save only one slide of the specimen. Hence, we cannot say with certainty whether this diverticulum had two or three coats, *i.e.,* whether or not there was a muscle coat, and we also do not know whether the characteristic lymph follicles were present. If no muscle wall was present, it may be considered a solitary acquired or "false" diverticulum of the cecum (no others were visible anywhere in the gastro-intestinal tract), but if this diverticulum did contain muscle tissue in its wall, then it should be considered a congenital one, or a true instance of double appendix, whether or not the lymphoid follicles were present. It is my contention that a congenital solitary cecal diverticulum and a second appendix are one and the same thing, a consideration not previously recognized either by the author (in 1930) or by any other writer on the subject.

Adams-Ray thinks he can distinguish between the two. He states that the appendix is apt to be richer in its lymphoid content, except in the fetus or the newborn, and that the arrangement of the muscular wall may vary in the two cases. He further says that the appendix can be distinguished from the congenital diverticulum because it is veriform, whereas the diverticulum is short and broad; also, that the latter is apt to arise from an haustrum while the appendix springs from a tenial band. Many pathologists do not agree with these conjectures. Of the 27 cases that Adams-Ray quotes as being true double appendices, 18 have positive and 9 probable histologic appearances. He cites 6 other questionable cases.

My recent case reminded me of a similar one I had reported in 1930, under the title "Primary Solitary Diverticulitis of the Cecum," and it seems that a brief review of that case may be indicated at this time.

Quoting from this article: "I wish to report a case I recently operated upon, first, because it is very rare, being a case of inflammation in a solitary diverticulum of the cecum; and also because histological examination of the removed solitary diverticulum demonstrated the presence of circular muscle fibres in its wall, a fact which at least suggests the possibility of its congenital origin. A careful review of the literature reveals only one similar case where circular muscle fibres were present.* In this case, reported by Pereira, all three coats were completely present. I am unable to explain on an embryological basis, the occurrence of a possibly congenital diverticulum of the cecum, unless it be true as was recently suggested by Greensfelder and Hiller that such primary solitary cecal diverticulæ may be due to 'retention in some residual form of the appendix which appears in embryological life but normally disappears before the true appendix develops.' "

This woman, aged 63, was admitted with localized pain over McBurney's point, with nausea but no vomiting. Following a diagnosis of acute appendicitis, operation was performed. The appendix was found to be normal but an inflamed, solitary diverticulum was found adherent to the anterior wall of the cecum. After separation from the surrounding adhesions, it was found that the diverticulum arose from the antero-lateral wall of the cecum, about two inches above the ileocecal valve. It was about one and one-half inches long, tense and congested, containing a large coprolith. The diverticulum was removed and the stump inverted with purse-string sutures. The normal appendix was likewise removed and recovery was uneventful. The pathologic examination revealed that the diverticulum was lined throughout with mucosa and contained numerous Lieberkühn glands. The muscularis mucosæ was present everywhere. Surrounding this were a few solitary lymph follicles and fatty tissue. A large patch of circular muscle fibre was also present, but not completely surrounding the diverticulum in this particular cross-section. The serosa completely covered the diverticulum and all of the layers were moderately infiltrated with lymphocytes, plasma cells and eosinophilic leukocytes.

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*A few other cases have been reported since this time with muscle fibre in the wall.

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Another case classified as questionable is that reported by Braatz. In this case, the appendix had been removed ten months previously and the patient came to Braatz because of a persistent sinus through the operative scar. Diagnosing it as an abscess, reoperation through the fistulous opening was done and a superficially situated appendix was unexpectedly found and removed. Apparently the second appendix had been overlooked by the first surgeon, who, perhaps, removed the non-pathologic appendix and left the diseased twin appendix behind.

In all, Adams-Ray described six "questionable" cases of double appendix, but to these I have added the cases of Ostrom and my own recent case (1942). Undoubtedly, there are several other cases that belong in this group.

In his lengthy discussion of the unquestionably proved 27 cases that he cites, Adams-Ray divides them into three groups. Group I consists of 8 cases, all found in full-term fetuses or young infants, which displayed numerous other abnormalities. He classifies these as the "avian," or bird, type of double appendix. They have many striking similarities, such as, in addition to twin appendices, vesical-vaginal communication, incomplete development of the colon and rectum, and atresia of the anus. The eight cases are those described by Bartels (1867), Emrys-Roberts and Paterson (1906), Hammer (1897), Kermauner (1906), Lawen (1913), Berenberg-Gossler (1913), Tango (1929) and Del Plaine (1936). In general, all had completely separate appendices arising on opposite sides of what corresponds to the ileocecal opening; all had vesical-intestinal communication, an incompletely developed colon and atresia ani. All but the case of Berenberg-Gossler had ectopia vesicæ. In the case reported by Emrys-Roberts and Paterson, the cecum communicated with the cloaca, which had an exterior opening.

Adams-Ray, in reviewing the embryologic development of the intestines, conceives that in these eight cases an arrest occurred just prior to the fourth week before the bladder and cecum were fully separated. The material for the appendix is presumed to exist on each side of the cloaca and normally unites at the indrawing place of the fold (Fig. A). When these two appendical anlage join together, we have one normal appendix, and there is complete separation between the bladder and cecum (Fig. C). When the infolds do not join together, we have an abnormal bladder-intestinal communication with the presence of a double appendix (Fig. B). Presumably, the development of a double appendix without bladder-intestinal communication can be explained by theoretical Figure D.

Adams-Ray wrote in 1940, that from 1815 to 1938, only 27 cases (18 histologically proved) of double appendix were recorded in the literature. Since the appearance of his paper, two other cases have been reported under this classification by Robertson (1940) and Waugh (1941). Adams-Ray neglected to include my case (1930) and that of Pereira (1927), due, no doubt, to their being classified as diverticulum instead of double appendix. Histologically, one should also search for lymphoid tissue, to make the diagnosis of double appendix more certain. However, in adults and sometimes in children, after several attacks of appendicitis, this lymphoid tissue is destroyed, but the muscular coat usually remains, at least in great measure.

My recent case (1942), reported here, must be included in the probable or questionable group of double appendix because no histologic section was available, and obviously cases of acquired, secondary, "false," or post-traumatic solitary cecal diverticulæ are not to be considered as double appendix. Adams-Ray did not include any of the cecal diverticulæ among his list of cases of double appendix. He stated that only 22 cases of cecal diverticulum have been reported (up to 1940), and that these "lie on the exterior or the posterior side of the cecum, between the teniæ," and are different in size and shape from an appendix. They rarely attain a length greater than 2 or 3 cm., and a diameter more than 1 cm. By his own definition, my case reported in 1930, as a primary solitary cecal diverticulitis, should be properly considered an instance of double appendix, since it was one and one-half inches long and contained a muscular coat and, in addition, a few solitary lymph follicles.

In addition to my case of 1930, and that of Pereira, which Adams-Ray missed, the following cases should have been included, because in all of them histologic evidence of a muscular coat (with or without the additional presence of charactertistic lymph follicles) was observed. They are (1) Odgvist and Petrén (1931); (2) Epstein (1933); (3) Thomsen (1935); (4) Owings and Morgan (1940); and (5) Berg (referred to by Braatz).

In Berg's case, two appendices arose, one from the left and the other from the right side of the cecum, the two being joined at their tips. Histologically, the lumen of both were joined at their tips, but the rest of the structure was that of a normal appendix. The sixth and seventh cases were reported by Bennett-Jones (1937). In one the muscle coat was apparent in two layers, and in the other case of congenital diverticulum the pathologic report stated that the muscular coat was also present in two layers. Microphotographs proved this point conclusively. The other cases (8 and 9) were reported by Robertson (1940) and Waugh (1941). In all, this makes 38 proved cases of double appendix—27 collected by Adams-Ray, my case (1930), Periera's case (1927), and the nine positive cases enumerated above.

In addition to the positively proved cases, some of the so-called questionable cases are perhaps also instances of double appendix, such, for instance, as my case of 1942, herein reported, in which positive histologic proof was not available. Also classified among the questionable cases are two reported by Adams-Ray himself, one of a patient who had an appendectomy in 1934, and another operation two years later, and the second of a patient upon whom he operated in 1937.

Also classified as a questionable double appendix is the case cited by Ostrom (1911), in which appendectomy

For this last group of partially connected appendices, Adams-Ray suggests a possible explanation: "If one imagines, first, a fusion of the apices of two (appendices) into one lumen, the nearer the bases have afterward lain, the greater has been the fusion between . . . until we obtain a processus veriformis with double lumen."

Three theoretical explanations have been advanced to account for these cases: (1) They are instances of a real double appendix; (2) they are single appendices plus a solitary cecal diverticulum, and (3) they are two cecal diverticulæ associated with aplasia of the appendix. Careful histologic study by an expert pathologist will usually determine whether or not the case is one of true appendix, that is, of a true or congenital cecal diverticulum. The presence and arrangement of muscle tissue, and especially in younger individuals the characteristic presence of lymphoid tissue, are microscopic evidences that favor the diagnosis of true appendices.

DISCUSSION

Two cases of double appendix, one certain and one probable, occurred in my private surgical practice. The recent case is especially important because it could easily have been overlooked and a fatal peritonitis might have ensued. Surgeons should beware of any "mass" in the meso-appendix. The occurrene of a double appendix also has medico-legal significance, because the surgeon may become exposed to a possible claim for damages if inflammation, requiring a second operation, occurs. Unless a specimen has been saved to prove the previous appendectomy, the surgeon may have difficulty in proving he had removed an appendix at the time of the first operation. In the larger cities, hospitals have pathologists, as a rule, but in the smaller rural hospitals this does not always hold true, with consequent additional risk to the surgeon. One way to avoid such risks is for the surgeon to look for a second appendix or any other abnormality of the cecum, such as a solitary "false" cecal diverticulum, at the time he does his original operation.

Cases have been reported in which inflammation in the second (and rudimentary) appendix has been misinterpreted as stumpitis, and the former surgeon may be unjustly blamed for having removed a diseased, even gangrenous, epiploic appendage, and to have mistaken this for the appendix in spite of the absence of lumen in the former. Moreover, in removing an appendix that does not appear to be pathologic enough to account for the patient's symptoms, the surgeon should bear in mind the possibility of a double appendix. The second appendix, which he may have overlooked, may be the one that is actually causing the patient's symptoms. The case reported by Braatz nicely illustrates this point. In all of these cases, stumpitis must not be confused with a second appendix.

It should also be borne in mind that cases of post-operative (traumatic) cecal diverticulum frequently occur, as reported by Bunts (1914), Greenfelder and Hiller (1929), and others. Quite recently, in removing an appendix extremely adherent to the cecum, with complete obliteration of the meso-appendix, I found that the cecal wall had been damaged, so that within a few seconds a pouch of cecal mucosa began to swell out between the lines of attachment of the meso-appendix to the cecal wall. I promptly recognized this quick development of a post-traumatic (acquired) diverticulum and repaired it by suturing the seromuscular margins over this defect with two rows of sutures. Had I not noticed this development, the patient would not only have been left with a bulging diver-

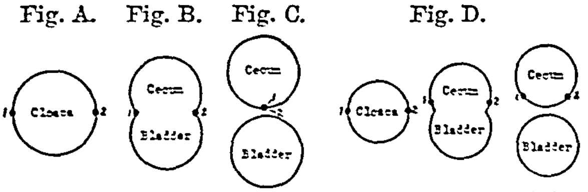

Fig. D. If unfolding starts at wrong place.

1, 2=Anlage of Appendix.

Diagrams giving plausible explanation for cases of double appendix, both with and without bladder-intestinal communication.

Adams-Ray believes the Pratt case (1933) to be a transitional form between the above group with bladder-intestinal communication and the next group without this defect. In this case, an infant operated upon at the age of eleven hours for imperforate anus, died of sepsis four days later. There was found no vesico-intestinal communication and the colon was developed down to the sigmoid but the rectum was absent. There were teral teniæ, ending at the bases of the two appendices.

Adams-Ray divided his second group into two sections; that of double appendix without vesical-intestinal communication and where the development of the large intestine is complete. Included are the cases of Grohé (1900), Schooler (1907), Young (1911), Jalaquier (reported by Berard and Vignard in 1914), Berthold (1932), Green (1932), Fleischman (1815), quoted by Grohé, Kaufmann (1922), and Wilson's case described by Cave in 1936. Robertson (1940) and Waugh (1941) described similar cases after Adams-Ray's paper was published. Also to be added to this group, are the nine positive cases that I have already added (Leonardo, Pereira, Berg, Odgvist and Petrén, Epstein, Thomson, Owings and Morgan) and the two cases reported by Bennett- Jones.

In the second division of the second group, Adams-Ray includes cases characterized by two cecums with an appendix at the normal site on each. These cases were reported by Rokitansky (1846), by Merkel in his *Tabelle Anatomicæ Pathologicæ,* and by Greig (1934).

The third group includes cases in which the two appendices are not completely separate. They may arise close together at the normal site, separated only by the fibrous connective tissue of the submucosa, and both contained in common muscular coats and serosa. Cases were reported by Rosenberger (1903) and Prentiss (1907). Walthard (1931) reported a case in which the appendix started from a single point of the cecum, then formed two parallel tubes for a distance of 25 mm., reuniting to form a single lumen for the last 10 mm. The whole process had a common longitudinal muscular coat and serosa, with one mesentary, but each branch had a separate mucosa, submucosa and circular musculature. In the case of Clavel and Colson (1933), two appendices were found at the usual site, about 1 cm. apart, running parallel with distinct lumens for their entire length. There was a slight fusion at a point near the tip, "so that only the mucosæ intervened between the two lumens." A single artery supplied both tubes, which were contained in one serosa and a single combined mesentary.

Another case is that of Elwyn (1924), who reports a "two-limbed" process, a normal one from the right cecal sacculation and another limb from the left, seemingly fused into a common appendix at the tip, each limb, moreover, with typical structure as to epithelium, glands and lymphoid tissue. "The lumina of the two tubes became continuous at the free tip, the common lumen extending a short distance." The last case of this group is that of Piraja (1934), in which the appendix originated at the usual site, continued upwards and was adherent retrocecally to the cecum, with which it communicated freely.

For this last group of partially connected appendices, Adams-Ray suggests a possible explanation: "If one imagines, first, a fusion of the apices of two (appendices) into one lumen, the nearer the bases have afterward lain, the greater has been the fusion between . . . until we obtain a processus veriformis with double lumen."

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Finally, a surgeon must be on the alert to recognize and distinguish between double appendix and other conditions simulating it, such as the case of self-amputation of the appendix, with the amputated portion becoming secondarily attached to the cecum to suggest a second appendix. Such a case is cited by Goldschmidt and included by Adams-Ray among his six questionable cases. The first attack of acute appendicitis, during which the assumed self-amputation occurred, was passed without resorting to surgery. Later, during another attack, Goldschmidt performed an appendectomy, removing what appeared to be a short, but normally developed, appendix. He then also noted a nut-sized mass on the anterior aspect of the cecum, which was covered with omentum, but seemed to have a mesentery of its own, thus suggesting a second appendix. When removed, however, no aperature was present in the cecum. Obviously, it represented the distal portion of the appendix that had sloughed off and become attached to the cecal wall. Histologically, it was a true appendix.

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SUMARIO

Treinta y ocho casos de apendice doble positivamente probados han sido reportados, ademas de otros pocos probables. Solamente por el estudio histológico puede actualmente determinarse si se trata de un apendice doble o de un diverticulo del ciego. La presencia de foliculos linfoides y una definida y completa capa muscular, esta ultima menos importante, establece el diagnostico de un verdadero doble apendice. En mi opinion, esto es

diverticulo cecal. [illegible] y congenito

RÉSUMÉ

Trente-huit cas positifs d appendices doubles sont rapportés dans la littérature. On rencontre aussi dans la littérature médicale quelques cos douteux. L'etude histologique determine si on est confronté par un appendice double ou par un faux diverticule cœcal. La présence de follicules lymphoides et une coulhe musculaire définie et relativement complète établissent le diagnostic d'appendices doubles. Dans mon opinion, ceci est synonyme avec un diverticule cœcal congenital et solitaire.

Выводы

Автор утверждает, что в литературе описанны тридцать восем случаев двойного червообразного отростка и несколько сомнительных случаев. Только гистологическое изучение может утвердить разницу между двойным аппендиксом и псевдовертикулом слепой кишки. Только наличие лимфоидных фолликулов и более или менее цельного мускульного слоя оправдывает диагноз двойного отростка. По мнению автора такой отросток есть конгенитальный дивертикул слепой кишки.

BOWDITCH, in 1853, referred to a case report of eventration of the diaphragm made by Senac in 1729. Most writers credit Petit as having first recognized and named the disease. Petit died twenty-five years prior to the appearance of his case report. The writings of Cruveilhier recognized Béclard as the originator of the term. March, in 1867, reported the first instance of clinical recognition together with autopsy observation. Widenmann, in March, 1901, made the first report of roentgen studies. Struppler, in May, 1901, made a similar report. The case of F. Schneider presented his diagnostic problem at various clinics. Hirsch, in 1900, made a diagnosis of hernia of the diaphragm. Wolkmann and Becker described the condition as dextrocardia. In 1905, Hildebrand and Hess, adopting Schlippe's technic of measuring respiratory variations of intragastric pressure, made a diagnosis of eventration of the diaphragm. In 1912, von Eggling performed an autopsy on Schneider and verified the original diagnosis of Hirsch. Wieting, in 1906, made the first and only report of eventration of the right side associated with a hernia of the left leaf of the diaphragm.

H. J. Sims, M.D.

Editorials

The Significance of the Carotid-Sinus Reflex in Biliary Tract Disease

THE occurrence of syncope, dizziness, collapse and even convulsions during an attack of biliary colic has occupied the attention of surgeons for years, particularly since Osler, in 1893, called attention to the significance and importance of these phenomena. Osler suggested that they were caused by the intensity of the pain; later, however, he considered cardiac standstill a possible use and emphasized the danger of sudn death due to such a reaction.

More recently, surgeons have given thought to the possible interrelation between gall bladder disease and cardiac dysfunction and it has been noted that improvement in the symptoms of coronary disease and subsidence of certain cardiac arrythmias occasionally followed the removal or drainage of a diseased gall bladder.

The cardio-inhibitory carotid-sinus reflex was examined in 23 patients with more or less acute symptoms of biliary tract disease, 13 patients with toxic hepatitis and 81 ward patients selected at random. Eighteen, or 78 per cent, of the patients with biliary tract disease had asystole of three seconds' or more duration on massage of the carotid sinus. Of these, 11 had common-duct obstruction and jaundice, 5 had cholecystitis and cholelithiasis, and 2 had the post-cholecystectomy syndrome. In 10 patients the carotid-sinus reflex was re-examined after the acute symptoms had subsided and was found to be negative in six. Seven patients had spontaneous symptoms consisting of dizziness, faintness or syncope in association with symptoms referable to the biliary tract. The five patients who failed to yield positive reactions had cholecystitis and cholelithiasis, without involvement of the ducts. Among the 13 patients with toxic hepatitis, only one showed an overactive cardio-inhibitory reflex.

Among the 81 ward patients examined at random, only 16, or 19 per cent, yielded positive reactions. The diagnoses in the positive cases included acute rheumatic carditis, coronary-artery disease, arteriosclerosis, cancer of the viscera, hyperthyroidism and duodenal ulcer.

The reaction is considered by the authors to be the result of a summation of afferent impulses and not a sensitization of the carotid sinus itself. The major portion of these impulses probably arises from afferent end-organs in the regions of the biliary tract, but when further impulses from the carotid sinus are added to the reflex arc, the threshold of reaction of the vagal centers is reached and cardiac inhibition results. The clinical significance of the hyperactive carotid-sinus reflex is discussed from the view of the various sites at which the reflex arc may become sensitized by disease.

Soviet Military Field Surgery*

"ALMOST fourteen months of the heroic struggle of the Red Army against the blood-thirsty Hitlerites have elapsed. During this time the army has learned new forms of warfare and strategy. Owing to the unusually vast motorization and mechanization of modern armies, the war has assumed a peculiar character of fighting operations, being carried out in a new fashion.

"It is, therefore, easily understood that the war medical service, in particular the organization of war surgery, had to take into account the above peculiarities to meet the requirements of modern warfare.

"The principles designed during the Soviet period reflect the general rise and initiative of the forces. Young leaders summoned to activity, actively criticized the system of the old Czarist army, and thoroughly studied the organization of war medical service and the field of military surgery, developed during the first imperialist war.

"The chief military medical administration of the Red Army concentrated its attention on the medical service of the American army, as this corresponds more nearly to the suggestions of the government, and to the attitude of scientific circles. The aims of the military medical administration were as follows:

1. War-time surgery should be founded on the achievements of modern science, both theoretically and practically.
2. War-time surgery should be carried on by competent physicians.
3. The organization of military medical service in the field of surgery in particular, should have an inexhaustible supply of materials, such as drugs, bacterial preparations, equipment, instruments and X-ray apparatuses.
4. Special attention should be paid to the health of the army personnel, primarily to preventive inoculations.

"According to these principles the military medical service has been organized as follows:

1. The specialization principle has been followed with regard to surgery, as well as to therapeutics and hygiene.
2. Much care has been given to the instructions of specialists in:
   (a) Major abdominal surgery.
   (b) Traumatology.
   (c) Mandibular facial surgery.
   (d) Neu ery.
   (e) Roen gy.
   (f) Inte es.
   (g) Epid ections.
3. All ou thoritative
   of the ve been mo

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*Reprinted from *The Military Surgeon*, December, 1942, 91: 657.

serve as chief surgeons in the army and at the front. This similar principle has been followed with regard to other specialties.

4. The chief military medical administration of the Red Army disposes of a sufficient number of military schools to meet the requirements in medical personnel.

"The military medical organization was thereby able to fill the vacancies of leading administrative officials, and conscription of physicians during the current patriotic war did not present any difficulties. Both at the call of our leaders, and on our own initiative, taking into account the general political situation, our society has been organizing, within recent years, congresses and special conferences on the problems of defense. Hence, all branches of medical work have been drawn on to deal with the eas and practical problems of defense.

"Great experience has been gained rom the severe battles against the foe, and consequent correctives were made in the organization of the military medical service. Thus the problems of blood transfusions were revised by supplying the army with medicines, bacterial preparations, instruments, etc. Many modern concepts and problems were likewise revised, and a study made of toxoids, bacteriostatic and sulphamide preparations, etc. The technic of Russian operations is widely known, and many of them have been approved abroad. Our instrument and chemical industries have started mass production and are able to supply the army and rear with chemical preparations and instruments.

"The number of surgeons at the present time exceeds the total number of physicians in the Czarist army. Our physicians are full of vigor and patriotic enthusiasm. They reveal the maximum initiative wherever they are. At the front, both physicians and the whole medical personnel work shoulder to shoulder with the army men, showing examples of heroism and courage.

"Surgical service, now in progress, has revealed the results of the pre-war preparatory work. One may see the old venerable surgeon-professor, as well as the younger one, both aiming at helping the front. There they occupy the position of army surgeons; they participate in performing operations, which is their main function. No wonder, then, that we have *achieved a 70 per cent return of the* wounded to the front!

"Many medical men have been highly decorated—not a few perishing in the fight for their fatherland. Their memory will be venerated—their heroic deeds and self-sacrifices live. The fatherland will never forget their names.

"At the present time our struggle has reached a point where extreme strain has to be exerted in all kinds of activity. Beyond a doubt, we shall find the necessary vigor and source of energy. All nations of the Soviet Union share in their supreme love for the fatherland and their will to exterminate Fascism and its adherents. Our front and rear form an integral whole.

"However, in our struggle for the common interests of all progressive humanity against Hitler's aggression, we are looking forward to more efficient assistance from our allies. The German Fascists are oppressing numerous nations, and threaten slavery not only to the Russians, but to Englishmen, Americans, and others as well. Many people well realize this menace, and it is time for all people to understand that their own independence and the fate of democracy are to be decided in Europe—that the main foe is Hitler Germany. The military machine of German Fascism should be crushed by the joint efforts of all allies.

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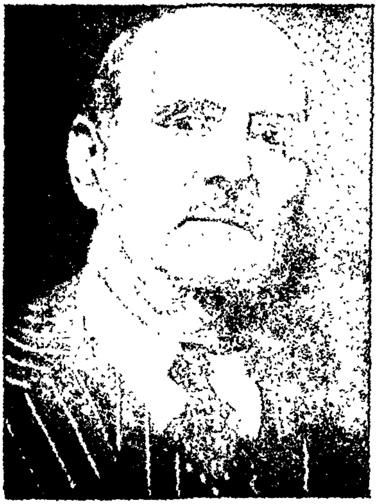
Peruvian Chapter News

DR FRED H. ALBEE, President of the International College of Surgeons, delivered an address on Surgical Rehabilitation last September, 1942, in the auditorium of the Workmen's Hospital, Lima, Peru. He described the modern concepts of surgical rehabilitation and stated that he believed the percentage of bone injuries would be much higher in this war, due to the modern conditions of mechanized and air combat. He defined rehabilitation as the return of an invalid to society in a physical condition in which he might sustain himself and become a factor of production in the community. The state of New Jersey was cited as an ideal example of a rehabilitation center. Not only is the surgeon concerned in the rehabilitation of an individual, but specialized centers of education and training are important. Thousands of rehabilitated invalids are working today in United States war industry through specialized training.

Dr. Albee projected two films, one exhibiting the technic employed in bone graft of the patella for the treatment of pseudoarthrosis, secondary to a transverse fracture of the patella. The function of the new saw invented by Dr. Albee for bone grafts was observed in this film. The second dealt with the treatment of rehabilitation of the crucial ligaments of the knee joint.

Dr. Constantino Carvallo, Minister of Public Health, Work and Social Provision, opened the address.

Dr. Francisco Graña, President of the Peruvian Chapter of the International College of Surgeons, gave the following address:



Dr. Francisco Graña

"There is an aspect of medical progress that consists of the continuous, anonymous, universal and silent efforts of scientists all over the world, who study and labor conscientiously and with fervor. This results in the slow accumulation of new facts, new interpretations, fortunate inventions or revealing symptoms, improved technics or efficient remedies. The immense material thus accumulated is selected and crystallized as time goes on and leaves us a continuous legacy of progress and perfection. But the great reforms, the discovery of new methods of research or new means of fight against diseases for eternal and everlasting achievements, have always been the work of selected spirits.

"I shall not recall all the past of medicine since its origin in the mysterious India or quantities of water daily is perhaps the best answer to the problem of prevention, for, given a dilute urine there is little likelihood of sufficient concentration for any salt to be deposited as crystals, whether or not there is a nidus.

Randall concludes that, although we have a much better control of stone formation today than a decade ago, with better cooperation of the pati there is still much to be done toward clarification of the problem and its c plete pathologic aspects.

A. L. Wolbarst, M.D

ANDREAS VESALIUS, in 1506, the founder of modern anatomy, discovered that life could be maintained after opening the thorax of ani[illegible] to study the motions of the heart by blowing air through a tube directly into the trachea. It is to be recalled that one of the chief functions of respiration was to aid in the circulation of the blood. Robert Hook proved this erroneous in 1667. He gave an account of his experiment which his colleagues questioned, and repeated the procedure on Oct. 29, 1667, before the Royal Philosophical Society.

“The thorax was displayed by the cutting away of ribs and diaphragme; and after that the pericardium of the heart also was taken off. The dog was kept alive by the reciprocal blowing up of his lungs with the bellows, and they suffered to subside, for the space of an hour or more, after his thorax had been so displayed, and his aspera arteria cut off just below the epiglottis, and bound on upon the nose of the bellows. Upon ceasing this blast from the bellows and fering the lungs to fall and lye still, dog would immediately fall into dy convulsive fits; but he was soon revi again by renewing the fulness of lungs with the constant blast of fr air.”

He observed that blood actually cir lated in the lungs throughout the exp ment, and concluded that the motion the lungs contributes nothing to the of the animal. It is not known when bellows were used as a means of resus tation. In the latter part of the eig eenth century, bellows were in gene use and were recommended by Royal Humane Society. The date of tubation for keeping the air passa open is not known. Desault accidenta injured the trachea in an attempt force esophageal feeding and observ that the larynx tolerated the presence the tube. From the observation he vised the technic of introducing a catl ter into the trachea for obstruction of t larynx.

H. J. Sims, M.D.

greatest progress in gastro-intestinal surgery. McBurney placed on a sound base the diagnosis of appendicitis. Hartley, initiator of intracranial neurectomy. The brothers Charles, Horace and William James Mayo, famous unforgettable surgeons, creators of technical procedures, in truth, geniuses in systematizing and organizing medical assistance; their clinic in Rochester has not only elevated the intellectual level of the doctors, but has founded a true aristocracy of professional conduct. Kelly was during half a century a figure of the first order, a great teacher to whom gynecologic surgery is indebted for its great progress. Halsted, who simultaneously with Bassini, practiced the radical cure of inguinal hernias. Crile, of Ohio, author of notable experiences regarding surgical shock, creator of anoci-association of block dissection of the lymphatics in cancer. Cushing, Professor of Johns Hopkins and of Harvard, one of the greatest neurologic surgeons of the world. Murphy, the most noted master of surgery of the present time, inventor of numerous methods of intestinal suturing and who did an epoch-making work in the production of cholecysto-intestinal, gastro-intestinal, entero-intestinal anastomosis and approximation without sutures by means of a special button.

"At the beginning of the present century another outstanding figure in American surgery loomed on the horizon. I refer to that greatest surgeon, Fred H. Albee.

"Already in the year 1809, Merrem successfully transplanted boneplates in the skull of animals, and Walther and Ollivier nearly a century ago demonstrated the reliability of this method of autogenic bone grafts. Macewen, Frangenheim, MacWilliams, Phemister and, above all, Albee, proved besides the reliability of the "taking" power of autogenous grafts and, what is most valuable, proved that if the grafts have to assume a function they are able to adapt themselves according to Wolf's law (structure, dimensions, resistance, etc.). Carter, lastly, proved that the graft could subsist without being in contact with another bone, as observed in many cases of nasal prosthesis that remained in the midst of soft tissue.

"The importance of Professor Albee's worl is that it has been created by beginning with simple data of an experimental character and extensive, innumerable experiments with the evolution of a technic, indications and instruments absolutely his own. The value of a reform in medicine or surgery is measured by its amplitude and extension of the benefits recorded in the results of its use and in this sense few advances made in modern surgery have had more ample projections and efficient applications than that of bone grafts.

"In the vast history of orthopedics and of reparative surgery, in surgery of today the work of Professor Albee is outstanding and his "Surgery of Bone Grafts," is a valuable and original contribution to surgical literature.

"A particular and very interesting aspect in the evolution of modern medicine, is its tendency to become international. The convention of Geneva that gave birth to the Red Cross in 1863 and in which many nations agreed to become neutrals in the fields of battle, wounded and sick, doctors and nurses alike, was the first manifestation. We know that this movement was profoundly noble and human, and it carries on its mission today with respect and abnegation in all the world.

"Another good sign of such an inclination appears in the award of the Nobel prize, without any consideration of the question of nationality, and thus it has honored von Behring, Ross, Finsen, Pavloff, Koch, Golgi, Cajal, Kocher, Kossel, Gullstrand, Carrel, Laveran, Roentgen and others.

"An equal demonstration of this internationalism we observe in the generous gifts of several American capitalists, such as Rockefeller and Phipps, who have invested huge sums in research work, in sanitary campaigns, in schools of medicine, all carried o in the varied countries of the universe.

"In 1935, there was founded in Geneva, Switzerland, the International College of Surgeons, an organization totally scientific, without any commercial basis, whose principal purpose is to bring together surgeons from all parts of the world in a common labor for the progress of science, to guarantee professional ethics, to stimulate research and to award prizes of merit and conduct without during the splendid era of Greece and Rome; the dark and contemplative Middle Age or the period of Renaissance, that represented the return to light and reason; not even the important times of the Seventeenth and Eighteenth Centuries, these vital periods of history in which the medical doctrines were established according to the great conceptions of human thinking. All I shall recall will be the years since the middle of the Nineteenth Century up to the present time, and in which the transition of hypothesis and theories have reached their climax in full domination of experimental determinism. Medical science has conquered more truth during this time than in all its secular past. The intellectual production is incalculable in this very short period of time, the scientific institutions, academies, medical schools, societies and other different groups, and thousands and thousands of devoted unknown heroes who have dedicated their lives to research and study. There is the exuberant and enormous medical literature of the last one hundred years that guards, coordinated and conducted, this immense wealth of human knowledge. But I shall repeat that the glorious edifice of modern medicine reposes totally on the foundations erected by the genius of the great reformers.

"Morton and Simpson, who discovered narcosis, broke down the great obstacle that prevented development of surgery. Lister was immortalized in founding antiseptic surgery. The superior genius of Pasteur created bacteriology, vaccination, serotherapy and asepsis. Roentgen achieved the miracle of making dark bodies transparent. Ehrlich with arsenobenzol initiated the positive chemotherapy whose horizons were clearly foreseen, and Domagk with the sulfonamids converted in fertile reality Ehrlich's dreams—the terapia sterilizans magna. Freud revealed the supreme importance of subconsciousness, illuminated and revolutionized the concept of physiology and pathology of the soul and its intimate reciprocal dependence with the physiology and pathology of the body.

"There is not one aspect of actual medical biology, surgery, psychiatry, and social hygiene which did not find a reason to be, its ways of conduct, its means of action, the motives for its progress and its triumphs in the fundamental principles of those reformers.

"It is not the task of the moment, nor could I do so, to outline the state of medicine in the actual world, not even with reference to only one center of importance. But you will permit me as an honor to the illustrious man of science who is visiting us, and to show more clearly the high position to which he attained, to recall to memory some of the eminent personages of North American surgery, and their valuable contributions to universal science.

"Of course, in the first half of the Nineteenth Century, surgery continued the tradition of the Eighteenth Century following predominantly the preanesthetic era and before Pasteur. In it shone without doubt figures such as Physick, considered the "Father of American Surgery," Post, King, the Warrens and MacDowell, contemporaries to Bell, Cooper, Coles, Brodie, Syms and Ferguson, in England; Larrey, Depuytren, Lisfranc, Delpech, Velpeau, Malgaigne, Nélaton, in France; Langebeck, Dieffenbach, Graefe, Strohmayer, in Germany; Nicoladoni, Loreta Pietro, Bassini, Nigrisoly, Rizzoli, Paci, and Codivilla, in Italy. However, at the second half of the century there appeared Sims, whose name we recall for the peculiar lateral position for gynecologic examination, his speculum, his operation for repairing fistulas and his important work "Clinical Notes on Uterine Surgery." Emmet, the initiator of plastic surgery of the feminine organs; Batey, of the renowned Medical College of Philadelphia, the first to suggest oophorectomy, and other operations of the uterine appendages. Later, Bigelow, Professor at Harvard Medical School, who was the first to excise the hip-joint in America, and who also introduced the surgical procedure of litholapaxy or lithotrity for rapid evacuation of vesical calculus. Gross, of the Jefferson Medical School, the greatest American surgeon of his time, and one of the best urologists of that epoch in the world. Keen, of the same medical school, a brilliant and skillful operator, particularly in brain diseases, author of *The System of Surgery*, the best American work of its kind. Senn, a great surgeon and master to whom we are indebted for the

Fourth International Assembly In Conjunction with the Eighth International Assembly of the United States Chapter

International College of Surgeons

WAR SURGERY AND REHABILITATION PROGRAM

WALDORF-ASTORIA HOTEL, NEW YORK, N. Y.
JUNE 14 to 16 (incl.), 1943

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distinction of race, nationality or faith. The motto of the institution is *Pro Humanitatis* and its basic dogma is inspired in the sayings of Pasteur: 'Science has no country, because knowledge is the patrimony of humanity and is the flame that illuminates the world.'

"The International College of Surgeons from that date has celebrated congresses and reunions in America and elsewhere and its membership today is from all countries in the world. The presence here of the Minister of Public Health gives prestige to this conference which is held under the auspices of the Peruvian Chapter of the International College of Surgeons, in whose name I address these words to Professor Albee, Preident of the International College, who is doing a work of intellectual research in the Americas.

"It is a new era in the history of medicine, an era of cosmopolitanism that distinguishes it for the close intercourse of representatives of science in the world. Only when men undertaking the same beliefs, follow equal purposes, is it possible to develop between them a sincere spirit of union in spite of the bitter situation and the tragedy that is flowing across the world. It is our duty to stimulate ourselves because perhaps science one day will traverse all the frontiers and demand a creed of peace, of harmony and dignity in human relations.

"It seems an unavoidable law in all human relations that when it accomplishes its purposes and reaches the crest desired, we find all roads leading downward, even towards the abyss. Only science is free of this fatality, because it never follows limited or narrow interests; it does not recognize the end of its task or the limit of its scope of progress and perfection, because its ideals are beyond that which perishes and that which is human and is lost in the contemplation of the infinite."

FOR VICTORY
BUY
UNITED
STATES
WAR
BONDS
AND
STAMPS

This is Your Country
to Have and to Hold

Keep Her Forever Safe and Strong

BUY MORE AND MORE WAR BONDS AND STAMPS

Alimentacion y Nutricion en Columbia. By Jorge Bejarano, M.D., Professor of Hygiene, University of Bogota; Honorary President, Pan-American Sanitary Office, Washington, D. C.; President, Tenth Pan-American Sanitary Congress. 170 p. Editorial Cromos, Bogota, 1941.

AS THE author states in the preface, this book has been written primarily for teachers, students and politicians who should be concerned with the problems of nutrition in their native land. The first chapters deal with the importance of nutrition in the physical and mental development of the individual and their influence on the race and the nation at large. The concluding chapters discuss the dietary habits of the various regions of Colombia, and stress that the solution of these nutritional problems depends above all on the correction of bad habits through education and such economic readjustments as to permit the proper feeding of the urban and rural workers.

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American Jewish Physicians of Note. By Solomon R. Kagan, M.D. 129 fig. $5. Boston Medical Publishing Co., Boston, 1942.

THIS volume presents about 300 biographic sketches of noted American Jewish physicians, with emphasis on their medical scientific achievements. The sketches are given in a concise form, *multum in parvo,* are accurate, and instructive. There is also included in this volume an Appendix—(Medical Chronology), which presents a great number of original scientific items of progress in American medicine for the past century. The material is arranged in chronologic order. It is well written, and contains vast new material of medicohistoric interest. The author is well known for his previous numerous original contributions to medical history. As a biographer and pupil of the late Fielding H. Garrison, he follows his steps. The only criticism is that there is a disproportion in the biographies. Some of them are very brief, while others are very long, covering many poses—for instance, the biographies of Dr. Leo Loeb, Dr. Howard Lilienthal, Dr. Milton J. Rosenau, and Dr. Ernest Spiegel.

In general, the book is a welcome contribution to American medical history. The medical profession owes a debt to the author for his industrious work in the field of the history of medicine.

B. W.

Manual of Standard Practice of Plastic and Maxillofacial Surgery. Prepared and Edited by the Subcommittee on Plastic and Maxillofacial Surgery of the Committee on Surgery of the Division of Medical Sciences of the National Research Council, and Representatives of the Medical Department, U. S. Army. 432 p., 259 fig. $5. W. B. Saunders Co., Philadelphia and London, 1942.

SINCE this work is primarily presented to meet the exigencies of the time, the treatment of malignancies has not been included. The authors are specialists and authorities in their respective branches. This book is one of a series of the military surgical manuals; others are to appear and promise in timeliness, authoritative dissemination of knowledge, and worthwhileness. This volume is the first of a series developed under the auspices of the Division of Medical Sciences of the National Research Council to furnish the medical departments of the Army and Navy with concise presentations of necessary information in military surgery. Succeeding volumes will cover the subjects of ophthalmology and otolaryngology; abdominal and genito-urinary injuries, orthopedic subjects, etc. The section on reconstructive surgery by Ferris Smith is excellent. Equally good are the sections devoted to the subjects of maxillary surgery by Brigadier General Leigh C. Fairbank and colleagues. Dr. P. C. Lowery has contributed a good chapter on maxillofacial prosthesis which describes the artificial replacement of parts destroyed by injuries to the face and jaw. The material is divided into four sections and comprises fifteen chapters. Section I deals with reconstructive surgery, Section II with maxillary surgery, Section III with maxillofacial prosthesis, and the last section discusses anesthetic technic. The work is noto-
riously free from padding and only essent
embodied. Not only those who are engaged
surgery, but the general surgeon as well, w
this work valuable and instructive. The i
thorough and the paper and binding of high
This work can be highly recommended.

Advances in Pediatrics. By Adolph G. De
M.D., L. Emmett Holt, M.D., and Frede
Tisdall, M.D. 291 p. Interscience Publishe
1942.

THIS is an attractive, well printed and
bound volume. Its purpose is to pre
review of some of the latest advances i
atrics during the past two years. The ten s
which constitute this work were chosen throu
medium of questionnaires by some of the
pediatricians of the United States as being th
important advances during this time.

This work is a fine presentation of the s
involved. The section dealing with "Toxop
sis," for example, is most complete, well
and should serve to stimulate clinicians to be
alert for this entity in its various forms a
occur at various ages. The section on "Electro
alography" wisely points out the pitfalls, a
as the advantages, of this laboratory proced
differentiating localized organic pathology
pure psychiatric disturbances. Persistent
arteriosus is discussed from the standpoint
dangers and the indications for its ligation
vincing proof of the beneficial effects of the
is presented in the form of records of a num
operated cases. The section dealing with "Vi
K in Hemorrhage in the Newborn Period" st
hypothrombinemia as the most common ca
spontaneous bleeding at this age, provided alte
in the vascular walls by such means as tr
asphyxia, infection, faulty cord-tieing, etc., ha
excluded as the primary cause. The author e
sizes that under normal conditions vitamin K i
utilized as it occurs in its natural source th
bacterial synthesis in the alimentary tract.
tailed review of "Virus Diseases" and "C
therapy in Diseases of Infancy and Childhoo
presented. Sections dealing with the "Prem
Infant," Endocrinology," and "Tuberculosis
included, all of which are well presented and
tically up to date. Short abstracts of other adv
in pediatrics, covering nine subjects are als
cluded. Extensive bibliographies accompany
of the ten monographs.

It is not clear to this reviewer whether thi
ume has served the purpose for which it wa
tended, as stated in the Preface. It is questio
whether the reader can hope to be brought ab
of the recent pediatric advances during the
two years through this medium of ten selected
jects. For the busy, average physician who w
to keep abreast of the pediatric literature, it
take more than ten subjects, preferably in abs
form, such as the tenth section of this volum
fill the gap between knowledge available in
atric textbooks and systems, and that present
the latest pediatric journals. However, *Advanc
Pediatrics* is a valuable asset in any physic
library.

L. J. HALPE

CONSTITUTION AND BY-LAWS OF THE UNITED STATES CHAPTER

(Continued from page IV)

Annual Dues shall be payable in advance.

ARTICLE XIX.

Meetings.

1. Meetings of the House of Delegates and of the General Assembly shall take place at the time and place as directed by the National Executive Council.

2. The year of the International Assembly meeting, the annual meeting of the United States Chapter shall be held in conjunction with the International Assembly, if at all possible.

3. If unable to meet with the International Assembly, the United States Chapter shall send an official delegation to the International meeting.

4. If unable to meet with the International Assembly, the United States Chapter shall provide for regional meetings or a National meeting as conditions may warrant, so timed as not to interfere with the attendance to, and interest in the International meeting.

5. If the annual meeting cannot be held at the time and place set because of some extraordinary reason, then the Executive Council shall determine the time and place for the meeting

ARTICLE XX.

General Scientific Assembly. The National Scientific Assembly shall devote its time and efforts to the presen- [illegible]

Program. The program shall be arranged as provided in the By-laws

ARTICLE XXI.

1. *Quorum.* At the annual meeting of the House of Delegates, the members of the Board of Governors, of the Board of Trustees, and of the Executive Council present at the meeting shall constitute the *quorum.*

2. *Proxies.* Members of the Board of Governors, of the Board of Trustees, and of the Executive Council, if unable to attend the House of Delegates meeting, may delegate their power to vote by proxy to any member of the above mentioned bodies, who is in attendance and who will then cast their votes

3. *Proxies* shall be filed with the Secretary of the Executive Council at the meeting.

ARTICLE XXII.

Constitutional Amendments.

1. At the stated Annual meeting of the House of Delegates, any Article of the Constitution may be amended by a two-thirds vote of the delegates registered at the meeting, provided, however, that Paragraph 6 of Article IX of the By-laws of the Central Organization of the International College of Surgeons shall have been fully complied with

2. During the interval from one general meeting to another amendments may be adopted by the duly recorded vote of the Executive Council. Such amendments shall be regarded as valid until they have been adopted by the House of Delegates at the next general annual meeting.

3. The written request for an amendment signed by one hundred (100) members of the United States Chapter, or presented by the Regent of any District shall be mandatory for the Executive Council to consider the request and vote upon it, as it best sees fit.

4. Any amendment to the Constitution legally made in the Constitution and By-laws of the United States Chapter becomes binding upon each member of the United States Chapter.

ARTICLE XXIII.

Vacancies.

Any vacancy occurring in the various committees of [illegible]

matter and appointed a successor to fill the unexpired term of that particular office.

ARTICLE XXIV.

Autonomy of the Chapter.

The United States Chapter is autonomous in its function and is free to formulate by laws to suit its respective needs as long as such by-laws abide by, and conform to, the Constitution and By-laws of the International College of Surgeons.

ARTICLE XXV.

Bequests of Funds.

1. Voluntary donations, gifts, bequests, or legacies to the United States Chapter become the unrestricted property of, and shall be used at the sole discretion of the Chapter, subject, nevertheless, to any specific provisions incorporated in the deed of gift.

2. All property, be it real estate, liquid assets or otherwise, shall be safeguarded by the Board of Trustees and the Executive Council.

ARTICLE XXVI.

Upon the adoption of this Constitution all other Constitutions are hereby repealed and declared *null* and *void.*

BY-LAWS

ARTICLE I.

Dues and Assessments.

1. The Fellowship entrance fee shall be $100.00, but this fee may be waived at the discretion of the Executive Council. The dues of a Fellow shall be $25 00 per annum for twenty years after which he shall be exempt from any further dues.

2. The entrance fee for a Member shall be $75.00. A Member shall pay dues of $25 00 per annum for 25 years after which no further dues shall be required.

3. The entrance fee for an Associate Member shall be $50.00 It may be paid in two installments, $25.00 upon application and $25 00 within 90 days. An Associate Member shall pay dues of $15.00 per annum for 35 years after which no further dues shall be required.

4. Masters shall pay no dues unless they hold an active Fellowship in the College.

5. The payment of dues shall entitle a member to copies of the Journal of the International College of Surgeons without additional cost.

6. Special assessments may be ordered by a two-thirds vote of the Assembly of the Chapter.

7. Dues and assessments shall be payable on or before January first of the calendar year for which such dues are levied.

8. Any Fellow, Member, or Associate Member, if he so chooses, may pay his Life Membership dues in one sum of $400.00.

9. Dues and Assessments shall be collected by the Executive Secretary or by the Business Secret[illegible] of th[illegible] College, and turned over [illegible] Trea[illegible] Chapter.

10. In States where Gu[illegible]

each entrance fee for Fellowship or Membership, and $10.00 from each Associate Membership, shall be remitted to the respective Guild Treasurer by the National Treasurer, and $2.00 from the annual dues of each Member, and each Fellow, in such States, shall be remitted to the State Guild Treasurer by the National Treasurer, and each Guild Treasurer shall submit semiannually, a financial statement to the National Treasurer, and said report shall be incorporated in the National Treasurer's report.

11. The record of payment of dues and assessments on file in the office of the Executive Secretary, or of the Business Secretary, shall be evidence of that member's fulfillment of his financial obligations to the Chapter, which shall give him the right to participate in the activities and proceedings of the College.

12. *Arrears in Membership.* A member of the College shall be deemed delinquent in the relationships as a member, if his dues and assessments are not paid ten months after the first of January of the calendar year.

13. *Penalty for Failure to Remit.*

a. A delinquent member, because of failure to pay his annual dues and assessments, shall be held suspended, in which case he shall not be permitted to participate in any of the proceedings of the College, and he shall not receive the Journal of the International College of Surgeons.

b. After one year of delinquency in paying dues and assessments a member shall be dropped from the membership roster.

c. A member who has been dropped from the membership roster because of delinquency in paying dues and assessments may be reinstated with full privileges upon payment of his arrears and approval by the Executive Council.

d. A member who has been permanently dropped from the membership roster shall be requested by the Executive Secretary to return his diploma.

Article II.

Disciplinary Measures.

1. Infractions of the Code of Ethics prescribed by the American Medical Association and the American College of Surgeons shall be sufficient cause for representations before the Executive Council for disciplinary action against the accused.

2. The Executive Council may originate action for the discipline of members who obstruct the work of the Chapter or fail to discharge their obligations to it.

3. The Executive Council may expel said members on technical grounds of lack of sympathy with the work of the College.

4. The action of the Executive Council shall be final.

5. The Executive Council shall have the right to obtain the surrender of diplomas and other membership credentials held by members who have been expelled after due action.

6. A member cited for disciplinary action shall have the right of hearing before the Executive Council acting as the *Board of Censors* and may appeal to the House of Delegates.

7. Any officer of the Chapter may be removed from office for cause by the Executive Council, but shall have the right of appeal with counsel to the House of Delegates which may confirm or reverse the action of the Executive Council.

Article III.

Conferring of Degrees, Diplomas.

1. The conferring of degrees and the distribution of diplomas to the newly elected candidates shall be the occasion for a formal ceremony.

2. The Executive Secretary of the Chapter shall read the names of the successful candidates and present them to the National President.

3. The National President shall in turn present the candidates to the International President, who shall admit them to the fold of the College and deliver to them the diplomas corresponding to their degrees.

4. If no International President, or if no International Officer representing the International President is present, the National President shall be empowered to deliver the diplomas to the candidates.

5. The incoming and outgoing Presidents shall deliver short, appropriate addresses.

Article IV.

Scientific General Assembly. Scientific Program.

1. The Scientific Program of the General Assembly shall be determined by the Program Committee of the Chapter, which shall be appointed by the President of the Chapter.

2. *Place of Meeting.* The place of meeting shall be determined by the Executive Council and its President. No Chapter sessions shall be held at the same time as the general International Assembly.

3. *Acceptance of Papers and Time Limit for Papers.* No paper shall be presented before a session unless the title and an abstract of the paper shall be in the hands of the Program Committee at least sixty days before the first day of the general meeting.

4. The time limit for the delivery of papers shall be fixed by the Program Committee.

5. *Property of Papers.* All papers read before the Chapter shall become the property of the U. S. Chapter of the International College of Surgeons and immediately after being read shall be deposited with the Secretary of the Section, if read before a Section or with the Executive Secretary, if read before the General Assembly.

6. No author shall cause a paper to be read before the Chapter to be published elsewhere as an original paper until it has first been published in the Journal of the International College of Surgeons or refused publication.

7. No Fellow or Member of the United States Chapter of the International College of Surgeons shall be allowed to occupy the floor longer than five minutes to the exclusion of other members who may desire to speak. This does not apply, of course, to those scheduled to make addresses.

8. No Fellow or Member of the United States Chapter of the International College of Surgeons shall be entitled to the floor for a second time during the same discussion until every other Fellow or Member who may desire has had an opportunity to speak.

9. No Fellow or Member shall be permitted to address the United States Chapter of the International College of Surgeons a second time during the same session on the same subject for a longer period than five minutes without the consent of the President.

10. Papers read before the United States Chapter of the International College of Surgeons shall be the property of the United States Chapter and subject to its disposal. Surgeons reading papers shall afterwards hand the same to the Secretary, as outlined in Article II, number 7.

11. Those Fellows or Members receiving invitations to address the Assembly shall notify the Secretary the period of time required to deliver his respective paper and designate the paraphernalia required for presentation. All motion pictures shall be presented to the Program Committee for approval before presentation.

ARTICLE V.

Meetings of the House of Delegates.

1. The House of Delegates shall meet annually the day preceding the time and place of the annual meeting of the United States Chapter, and independent of the International Assembly.

[illegible]

order of business for the opening and closing sessions of the House of Delegates.

A. *Opening Session.* The opening session shall take place independently of the General Assembly.

1. Call to order by the President.
2. Roll call.
3. [illegible] meeting.
4. [illegible]
5. [illegible]
6. [illegible]
7. Introduction of Resolutions.
8. Miscellaneous Business.

B. *Closing Session.* The closing session shall take place in conjunction with the General Assembly.

1. Roll call.
2. Consideration of unfinished business of the preceding session.
3. Reports of Reference Committees.
4. Miscellaneous Business.
5. Report of the Committee on Nominations and the call for nominations from the floor.
6. Election of Officers.
7. Announcement of Committees appointed by the newly installed President and action thereon by the House of Delegates.
8. Unfinished Business.
9. Choice of next meeting place.
10. Final Adjournment.

ARTICLE VI.

1. The order of business may be modified by a majority of the delegates present, at that session.

2. All parliamentary procedures of the United States Chapter shall be under Robert's Rules of Order

ARTICLE VII.

Nomination and Election of Officers.

Committee on Nominations and Election of Delegates.

1. The President shall appoint a Nominating Committee composed of three members (delegates). The Committee on Nominations shall report to the House of Delegates the ticket containing the names of the prospective officers.

"This slate of officers shall be presented to the House of Delegates at the annual stated meeting, when additional nominations from members of the House of Delegates shall be in order."

2. The nominations for the various offices may also be made by any member of the House of Delegates.

3. Not more than three minutes shall be devoted to the nominating speech for the President-elect.

4. All elections shall be by ballot In case no nominee receives a majority of the votes cast on the first ballot, the nominee receiving the lowest number of votes on the ballot shall be dropped and a new ballot taken. This procedure shall be followed until a nominee is elected [illegible] es taken.

5. The [illegible] se of Delegates of t[illegible] in accordance with Article XI, paragraph 1 of the International Constitution.

ARTICLE VIII.

Duties of Officers.

1. *President.*

a. The President shall preside at all meetings of the Assembly, of the House of Delegates and of the Executive Council.

b. He shall be ex-officio member of all the committees of the Chapter.

c. He shall appoint all committees for the selection of which other provisions have not been made.

d. He shall deliver the annual address at the meeting of the General Assembly.

[illegible] based upon the assets of the Treasury.

f. He shall see that the budget as provided by the Executive Council is lived up to, unless the latter shall authorize the President to disregard the budget.

g. All invoices for expenses of the Chapter shall be signed by the Executive Secretary and countersigned by the President before they are submitted to the Treasurer for payment.

h. The President shall see that an itemized statement of all expenditures of the Chapter is presented to the Executive Council for its approval every month.

i. In a general way the President shall perform such other duties as may pertain to the principal administrative officer of a corporation.

j. The President shall have the privilege to call emergency meetings of the Executive Council, providing at least one week's notice to given to the members of the Council.

k. All important issues, policies and messages to the membership concerning the welfare of the Chapter shall be submitted to the Executive Council before they are acted upon by the President. He shall at all times exert every effort to maintain the *morale* of the Chapter at its highest possible level, and shall discourage all attempt at *cliquism* and political *intrigue*.

l. As immediate Past-President he shall become automatically a member of the Executive Council for two years following his term of office as President.

2. *President-elect.*

a. The President-elect shall take office at the expiration of the term of office of the President.

b. As *President de facto* he shall attend all meetings of the Executive Council with power to vote.

c. He shall do everything in his power to acquaint himself with the affairs of the College.

3. *Vice Presidents.*

a The Vice Presidents, five in number, shall be among the national officers They shall assume in their respective order of seniority the duties of the President during the absence or disability of the latter. If the office of the President becomes vacant, the senior Vice-President shall succeed to the Presidency.

4. *Treasurer.*

a. The Treasurer shall receive all funds due to the Chapter from any source whatsoever in the manner as outlined by the Constitution

b. He shall deposit and keep all funds of the Treasury in a National Bank, in the name of the United States Chapter of the International College of Surgeons.

c. He shall keep a complete set of books concerning the receipts and expenditures of the Chapter, subject to the direction of the Executive Council and its President.

d. He shall not pay monies out of the Treasury unless such vouchers are signed by the Executive Secretary and countersigned by the President.

e. He shall submit every month to the Executive Council an itemized statement of the financial transactions and situation of the Chapter.

f. He shall render an annual trial balance statement of his accounts to the Executive Council. For this purpose he shall employ a certified public accountant.

g. At the expense of the Chapter he shall give bond in such amount as shall be required by the Executive Council.

h. He shall also act as the Treasurer of the Board *of Trustees.*

i. At all times he shall have the privilege of making suggestions as to the improvement of the Treasury.

5. *National Executive Secretary.*

a. The National Executive Secretary shall be *ex-officio* Secretary of the House of Delegates.

b. As executive agent of the Chapter, he shall transact its business under the direction of the Executive Council.

c. He shall collect all dues and assessments from the members of the chapter and forward them to the Treasurer.

d. He shall have charge of the business office of the Chapter and may employ such aid as shall be authorized by the Executive Council.

e. He shall be custodian of all books and papers belonging to the Chapter except those of the Treasury.

f. He shall provide for the registration of members the annual meetings and shall provide for report- g the proceedings of the annual meeting.

g. He shall conduct the official correspondence, notifying members of the meetings, officers of their committees, of their appointments and duties and shall perform such other duties as may be assigned to him by the Executive Council.

h. He shall notify applicants concerning the success or failure of their applications.

i. After the approval of the Executive Council, he shall submit to the International Council an annual report of the affairs of the Chapter.

j. At the expense of the College both he and the Business Secretary shall give bond in such amount as may be required by the Executive Council.

k. With the authorization of the Executive Council, the Executive Secretary may delegate most of the above duties to a *Business Secretary* who need not be a physician, nor a member of the Chapter.

ARTICLE IX.

Eligibility of Officers for Re-election.

Re-election of Officers.

1. The retiring President shall *not be eligible* for re-election to the Presidency.

2. The Executive Secretary and the Treasurer of the Chapter may serve indefinitely, provided their election is confirmed at each biennial meeting.

3. Nothing in the By-laws shall be construed as forbidding the re-election of officers excepting the President, after an interruption of consecutive service.

ARTICLE X.

Board of Trustees.

1. *Meetings of the Board of Trustees.*

a. The Board of Trustees shall hold meetings during the annual meetings of the Chapter and at other times as necessity may require at the call of President, or on petition of two members of Board of Trustees.

b. If interim meetings cannot be held, busi may be transacted by mail.

c. The Board of Trustees shall record in the J nal of the International College of Surgeons its m ings and activities after approval by the Execu Council.

2. *Duties of the Board of Trustees.*

a. The Board of Trustees shall receive and m age, with the approval of the Executive Council, gifts, bequests, legacies, whatever their nature, m to the United States Chapter by generous contri tors.

b. *The Board of Trustees shall be subservien* the Executive Council and its President.

c. The Board of Trustees shall invest in appro S. E. C. securities any or all surplus monies, wh have accumulated in the Treasury of the Uni States Chapter, and which are not needed for running expenses of the Chapter. These reser shall, however, be delivered on demand to the Exe tive Council if, and when needed.

d. The Board of Trustees shall have the power solicit contributions and bequests for the Uni States Chapter toward the establishment of fu for purposes designated and approved by the N tional Executive Council.

e. Upon receipt of gifts, bequests, be they in t nature of real estate, or liquid assets, the Board Trustees shall, with the full co-operation of the N tional Executive Council, proceed immediately to u dertake the necessary steps to find the best, saf and most efficient way to invest and manage the new acquired assets, as well as the accumulated unus surplus monies in the Treasury.

f. The Board of Trustees shall make reports the Executive Council at intervals stipulated by t latter.

g. The Board of Trustees, after conferring wi the Executive Council, shall have the right to refu contributions or donations, if it is deemed wise do so.

ARTICLE XI.

The Executive Council.

1. During the interim between annual meetings the United States Chapter the Executive Council is t *supreme legislative and executive body.* It is answe able to the House of Delegates.

2. The Executive Council shall transact the essenti business of the Chapter and exercise legislative pow within the limits of the Constitution.

3. The Executive Council shall have the jurisdicti over the Board of Governors and the Board of Trustee

4. The Executive Council shall act as a Committ on Credentials, whose duties are outlined in the B Laws, Article X.

5. The Executive Council shall provide for the cr ation of a *Board of Examiners,* composed of five mem bers, including its chairman, to serve for two yea each. For duties of the Committee see By-Law Article IX.

6. The Executive Council shall appoint each year i advance a *Scientific Program Committee* composed three members, one of them being the Executive Secr tary, who shall act as *Scientific Secretary.*

7. External and diplomatic relations with othe

(Continued, page 153)

The Journal of the

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Primary Malignant Tumors of Bone with Special Reference to Osteogenic Sarcoma*

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THE discussion of malignant bone tumors must, of necessity, be a repetition of that which has already been said or written. Yet, in spite of the voluminous literature, much confusion still exists in the minds of students and practitioners concerning the classification of these tumors, the pathologic diagnosis, the diagnostic procedure, and their proper treatment. No new data are available concerning the etiology. Trauma is still mentioned as an associated factor in a certain percentage of malignant bone tumors.

After looking over the statistics of our clinic and those of many others, one wonders whether malignant bone tumor is the dread disease it appears to be, or whether, in our attempt to make certain of the diagnosis by specimen and punch biopsy, we do not spread the disease so that early metastasis and subsequent high mortality result. Is the specimen and punch biopsy a safe procedure, or is it, perhaps, responsible for the high mortality rate which osteogenic sarcoma now enjoys by metastasizing the disease, just as squeezing a boil spreads the infection? By the use of this method, are we not breaking down protective barriers in our search for a diagnosis?

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*Read before the Seventh National Assembly of the International College of Surgeons, Denver, Colorado, July 15-18, 1942.

In 1898, Keen performed a scapulohumeral amputation on a sister of the late Dr. Willis F. Manges. The pathologic specimen was examined by W. M. Late Coplin, Professor of Pathology in Jefferson Medical College, and a diagnosis of osteogenic sarcoma was made. This patient is still living 44 years after the operation. No specimen or punch biopsy was done in this case. I know that it may be argued that Keen removed a giant-cell tumor, but it is hardly likely that he would report it as an osteogenic sarcoma, or that he would make the wrong diagnosis, either alone or in conjunction with Coplin, even at that time.

In contrast to this remarkable feat, there are two cases of osteogenic sarcoma in our series, treated just as radically as that of Keen. The first case received preliminary X-ray therapy, followed by punch biopsy and radical hip-joint amputation. Death from metasta- to the lungs resulted within eight nths. In the second case, preliminary -ray treatment and punch biopsy were followed by scapulo-humeral amputation. Death occurred seven months later from metastasis to the lungs. In each of these cases the diagnosis was made within six months of the onset of the disease, and surgery was performed after the completion of the preliminary X-ray treatment.

Concerning the diagnosis of osteogenic sarcoma, the roentgenologist and pathologist are equally in the dark when it comes to reaching a conclusion, and it is at this point that the tide turns between delayed and early operation.

For the past two years, we have been doing experimental work on the injection of the blood vessels of the extremity in which the growth exists. Our results have been encouraging but not decisive, and it was not until the work of Alberto Inclan, of Havana, Cuba, that any convincing facts were revealed. Inclan shows that the most striking and characteristic arteriographic sign of bone malignancy is the filling in of the stroma of the newgrowth by numerous vessels, forming an erratic network and showing the extension of the invading tumor. Careful examination of the arteriogram under a magnifying glass enables one to trace these vessels and their irregular disorderly distribution into the tumor mass.

Another evidence of malignancy is the presence of new atypical arterial circulation with pedicles from the main artery

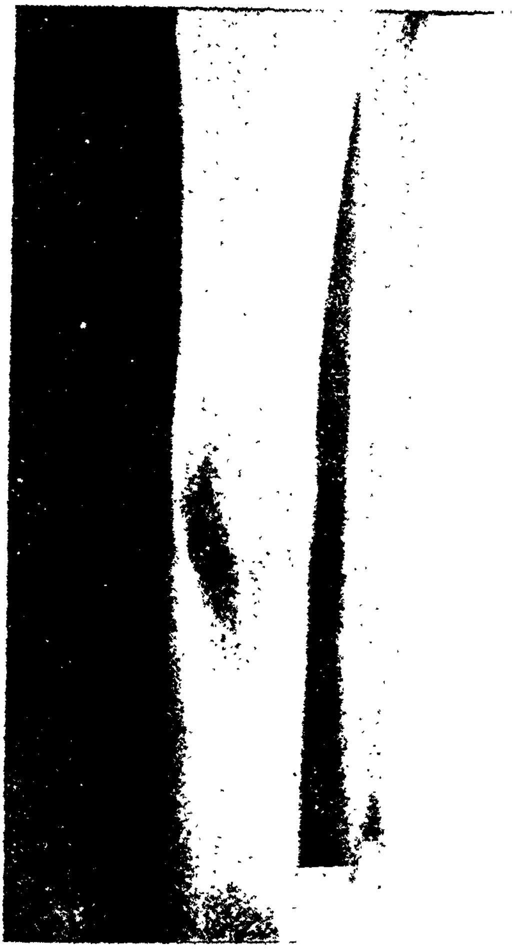

Fig. 1. X-ray of Adamantinoma of right tibia.

and numerous irregular branches entering the bone lesion. This is an important observation, since it defines clearly the limits of the lesion.

In our opinion, Inclan's next statement that there is a premature appearance of a very rich venous circulation with the formation of gross venous pedicles arising from the tumor, and entering the neighboring vein, is of the utmost importance.

His final conclusion is that in the more advanced cases there is increased arterial circulation which is perpendicular to the bone and has the characteristic X-ray appearance so frequently spoken of by roentgenologists as pathognomonic. Inclan shows positively that this is the very late manifestation of the disease.

We find, therefore, that three distinct factors in the diagnosis of osteogenic sarcoma are promulgated in Inclan's article, *viz:*

1. That the sun-ray manifestation in which the roentgenologist can conclusively make the diagnosis is a very late sign.
2. That the very rich venous circulation which exists early in osteogenic sarcoma is not only diagnostic, but also bears out the conclusion that *specimen and punch biopsy spreads the disease into the venous circulation by rupturing and damaging these structures.*
3. That arteriography, as carried on by Inclan, easily distinguishes the benign from the malignant tumor, and rules out the various types of inflammatory bone lesions which are often confused with malignant bone tumors by the roentgenologist and the clinician.

One of the cases in our series, a child of eight years, was diagnosed by the roentgenologist as osteomyelitis, and, clinically, the case conformed to that diagnosis. Repeated operations were performed over a period of one year, at the end of which time the child died. Following autopsy, the pathologic diagnosis of liposarcoma of the femur was made by Baxter L. Crawford of Jefferson Hospital, and confirmed by Ewing.

A second error in diagnosis had a calamitous result. A man, aged 47, fell and struck his shin. A diagnosis of Garré's osteomyelitis was made. A biopsy specimen was taken and the diagnosis of the pathologist was as confusing as that of the roentgenologist (Fig. 1). This case was reviewed by the leading roentgenologists of Philadelphia, but no conclusion was reached. The specimen was finally sent to the Ewing Clinic, where a diagnosis of adamantinoma of the tibia was made. We all know that this is a relatively benign tumor and that it is in this type that the best results should be obtained. A mid-thigh amputation was performed and the patient was given post-operative X-ray treatments, yet within nine months he was dead with metastasis to the lungs.

Many similar cases could be cited, but I believe that enough has been said to make us wonder whether we are not sacrificing the life of the patient in our attempt to be positive of our diagnosis.

In this series of cases studied over a period of 20 years, 43 patients with osteogenic sarcoma were observed, 10 with Ewing's tumor, three with multiple myeloma, one with adamantinoma of the tibia, one with liposarcoma of the bone, and 35 cases of osteoma or osteochondroma. In this last group a certain percentage became malignant. Under the heading of osteogenic sarcoma we have included the cortical, the subperiosteal, the periosteal, the fibrosarcomas and the myxosarcomas.

OSTEOGENIC SARCOMA

Histologic study was made in every case of osteogenic sarcoma included in this group, and several of them are listed in the Bone Sarcoma Registry. These are all proved cases from this institution in a period of 20 years. Certain features of these tumors are worthy of further analysis. The diagnosis was based on clinical findings, X-ray study, and tissue examinations. Certain lesions presented difficulty in differentiation, especially osteomyelitis, Ewing's tumor, Garré's osteomyelitis, tuberculosis, lues and giant-cell tumor.

The histologic diagnosis was determined by aspiration biopsy in three cases, open biopsy in eight cases, and operative specimen in 32 cases.

The age incidence in this series was basically the same as in other series, with a slightly higher proportion of older individuals than usual (Table I).

TABLE I.
AGE GROUPING

AGE	NO.	DEAD	LIVING
0-10	2	1	1
10-20	12	10	2
20-30	8	5	3 (1 with disease)
30-40	5	4	1
40-50	6	4	2 (1 with disease)
50-60	8	5	3 (2 with disease)
60-70	2	1	1 (with disease)

As is the usual experience, the best chance of five-year survival seems to be in the age group between 10 and 30.

Approximately twice as many cases occurred in males as in females, and with more long survivals (Table II).

TABLE II.
SEX GROUPING

SEX	NO.	DEAD	LIVING
Male	27	19	8 (2 with disease)
Female	16	11	5 (3 with disease)

Meyerding reported 146 males and 70 females in a total of 216 cases. Coley reported better survival rates in females (28 per cent) than in males (18 per cent) in a series of 160 cases.

The duration of the tumor on admission to the hospital is interesting. The shortest time noted was four days, the longest 18 years (Table III).

TABLE III.
DURATION OF TUMOR

TIME	NO.	DEAD	LIVING
Under 1 month	1	1	
1-3 months	10	6	4
3-6 months	7	5	2 (1 with disease)
Under 1 year	6	6	
Over 1 year	16	9	7 (3 with disease)

Many of the tumors present over one year were low-grade, malignant lesions.

TABLE IV.
TIME BETWEEN TRAUMA AND ONSET OF LOCAL FINDINGS

TIME	PAIN	TIME	TUMOR
Continuous	1	Continuous	1
10 days	1	10 days	1
1 month	6	1 month	3
2 months	2	5 weeks	1
3 months	2	2 months	1
4 months	1	2½ months	2
6 months	2	3 months	1
14 months	1	14 weeks	1
2 years	1	6 months	1
4 years	2	16 months	1
Indefinite	1	3 years	1
		4 years	1
		5 years	1
		Indefinite	1
		Tumor not noted by patient	3

The question of trauma as a cause of osteogenic sarcoma has been debated extensively. It is our feeling that while not susceptible of accurate proof or disproof, in certain cases trauma may play a part in the genesis of such a tumor. In this series a definite history of trauma to the part involved was given by 40 of 43 patients, and was questionable in two other cases. In most instances, trauma was of minor character, but in one case a fracture of the humerus was followed one and one-half years later by an osteogenic fibrosarcoma at the same site (Table IV).

The distribution with regard to the bone involved was not far from that usually reported, and the best prognosis on the basis of so small a number would seem to be in lesions of the tibia and lower femur (Table V).

TABLE V.
BONE INVOLVED

Bone	Total Cases	Dead	Living
Tibia	13	10	3 (1 with disease)
Femur	11	8	3
Humerus	3	2	1
Fibula	2	2	
Ilium	4	2	2 (with disease)
Maxilla	2	2	
Mandible	1		1
Vertebra	2	2 (Post-op.)	
Scapula	2	1	1 (with disease)
Sternum	1		1
Rib	1	1	
Coracoid	1		1

As might be expected, the lesions of lower degree of malignancy carried a more favorable prognosis. The group of fibrosarcoma was reported as primary bone tumor, but the exact site of origin was not specified (Table VI).

In all but four of the 43 patients, surgery beyond biopsy was permitted. Four patients permitted biopsy, but nothing more (Tables VII and VIII).

TABLE VII.
PROCEDURES OF TREATMENT

Procedure	No of Cases
Amputations	23
Adequate operations on extremities	1
Adequate operations on trunk	5
Biopsy	11
Inadequate operations	3

TABLE VIII.
FURTHER SUBDIVISION OF PROCEDURES

Procedure	No of Cases
Local operation	9
Local operation followed by amputation	3
Biopsy only	4
Biopsy followed by amputation	1
Biopsy followed by other operative procedures	6
Curettage followed by amputation	2
Laminectomy	2
Exploratory thoracotomy	2
Amputation only	18

Thirty-nine of the 43 patients received other forms of therapy (Table IX).

TABLE IX.
OTHER FORMS OF TREATMENT

Treatment	Total Cases	Dead	Living
Pre-operative X-ray	21	14	7 (3 with disease)
Post-operative X-ray	13	7	6 (1 with disease)
Radium	5	3	2
Coley's fluid	4	4	
Lead	4	3	1
Iron ascorbate	2	1	1
X-ray only	1		1 (with disease)

TABLE VI.
PATHOLOGIC GROUPING

	Total Cases	Dead	Living	Survival %
High Grade	2	2		0
Intermediate or not specified	30	24	6 (3 with disease)	10
Chondrosarcoma	5	2	3 (1 with disease)	40
Periosteal fibrosarcoma	1	1		0
Fibrochondro-osteosarcoma	1		1	100
Fibrosarcoma	4	2	2	50

It can be seen that radiation apparently improved the outlook, but that it was used almost exclusively in conjunction with surgical procedures.

Biopsy.—Open biopsy has been discarded almost entirely as dangerous, both locally and because of possible spreading of metastasis. Biopsy, with the intention of amputation, based on frozen section tissue study, is often impossible and injudicious because of the difficulty in the preparation of sections and the uncertainty of snap diagnosis in bone lesions.

Aspiration biopsy was sufficient for diagnosis in several cases, but the value of this procedure depends upon the skill in the technic and the services of an exceptionally skilled pathologist. Authorities are not entirely certain that the pro- ure is without danger. It would not to be dangerous to aspirate a tu- which has already broken through capsule.

When to Amputate.—The recent reports of Ferguson, and the older work of Albee and others, have brought to the fore the possible danger of too early amputation of an uncontrolled, rapidly-growing osteogenic sarcoma. The analysis of the first 400 cases from the Bone Registry would indicate that indiscriminate early amputation may be fatal in that 15.8 per cent survived early amputation, while 31 per cent survived late amputation for a period of five years. This would seem to reverse the accepted belief of amputation as soon as possible. This is now changed to amputation at the earliest optimum time. The optimum time is interpreted as seven months after the onset, or earlier, following radiation, and at a time when the blood phosphatase is not elevated and the local lesion is not expanding rapidly. Detailed observations and adequate study of new cases must be made to check up on the value of these conclusions. We have available phosphatase studies on only a few of the most recent cases. The last one studied in this manner was a 23-year-old colored female with a lesion at the lower end of the femur. She was treated extensively with radiation, with no response clinically or radiographically. Amputation was performed three and one-half months following the onset. The blood phosphatase was normal. Death with pulmonary metastasis occurred within eight months following the onset.

We were exceptionally fortunate in obtaining a complete follow-up study on our patients (Table X).

TABLE X.
PRESENT STATUS OF PATIENTS

STATUS	NO. OF CASES
Dead of disease	28
Living with disease	5
Living without evidence of disease	8
Operative deaths	2

TABLE XI.
RESULTS OF TREATMENT

RESULTS	NO. OF CASES	DEAD	LIVING	SURVIVAL %
Refused amputation	4			
Non-resectable	7			
Amputations	23	18	5	21
Other operative procedures	9	5	4	(excisions)
Total	43	23	9	21

Of 32 patients on whom an adequate operation could be done, eight are living without evidence of disease (25 per cent). Six of the 32 cases (18.7 per cent) survived five years (Tables XI, XII and XIII).

The survival rate in all the recently reported series is nearly the same.

TABLE XII.
LENGTH OF SURVIVALS

Length of Survivals
12 years, 6 months
11 years, 6 months
9 years, 10 months
8 years
6 years, 9 months
5 years
4 years, 6 months
3 years, 3 months

Case 4.—Thirteen year-old male with typical osteogenic sarcoma of the lower end of the femur. He had pre-operative radiation and amputation of the upper one-third of the femur eight months after the onset, and is living and well eight years later.

Case 5.—Twenty-three year-old female with fibrosarcoma of humerus. She had pre- and post-operative radiation and amputation of the upper one-third of the humerus eighteen months after the onset, and is living and well six years and nine months later.

Case 6.—Twenty-six year-old male with fibrochondrosarcoma of coracoid process. He had excision and implantation of radium one month after the onset, and is living and well five years later.

Case 7.—Three year-old male with fibro-osteosarcoma of mandible. He had local excision, radium and post-operative radiation four months after the onset, and is living and well four years and six months later.

Case 8.—Forty-nine year-old female [illegible] chondrosarcoma of sternum. She had [illegible] tion five years after the onset, and is [illegible]ing and well three years and three mont[illegible] later.

TABLE XIII.
SURVIVAL RATE

	No of Cases	3 Yr. Survivals %	5 Yr. Survivals %
Ieyerding and Valls	216	31.1	20.3
oley	160		40—low grade 15-16—all others
one Registry	400		15.8—early amputation 31—later amputation
efferson 1926-1941	43	25	18.7

Analysis of Surviving Cases.—Case 1.—Thirty-five year-old male with a typical osteogenic sarcoma of the upper end of the tibia. He had pre- and post-operative radiation and amputation two years and eight months after the onset, and is living and well twelve and one-half years later.

Case 2.—Seventeen year-old male with typical osteogenic sarcoma of the upper end of the tibia. He had pre- and post-operative radiation and mid-thigh amputation seven months after the onset, and is living and well eleven and one-half years later.

Case 3.—Fifty-one year-old male with fibrochondro-osteosarcoma of the lesser trochanter of femur. He had excision and post-operative radiation three months after discovery. He is living and well nine years and ten months later.

Only one case of Paget's di[illegible]se was encountered in this series. Th[illegible] sarcoma

TABLE XIV.
EWING'S TUMOR

Age	Sex	Duration	Bone	Treatment	Result
18	M.	20 mos	Scapula	Aspiration biopsy, X-ray therapy	Dead [illegible]
17	F.	2 wks	Scapula	Aspiration biopsy, X-ray therapy	Dead [illegible]
36	M.	6 mos.	Scapula	Aspiration biopsy, X-ray therapy	[illegible]
38	F.	12 mos.	Ischium	Local operation	[illegible]

involved the ilium. The patient was living, with evidence of the disease in July, 1941.

EWING'S TUMOR

Four cases of this lesion were studied completely. Several cases originally diagnosed as Ewing's tumor proved to be osteogenic sarcoma or metastatic carcinoma. The most striking of these was a solitary metastasis of the ulna from a primary carcinoma of the kidney.

The first three patients died of metastasis and the fourth post-operatively. Response to early X-ray therapy resulted in reduction of the size of all the lesions and apparent bone regeneration. However, reactivation followed by pulmonary metastasis occurred rapidly (Table XIV).

Meyerding reported 114 cases with 21.2 per cent of five-year survivals, summarizing all methods of treatment; 37.5 cent of those treated with radiation e survived. Many of these lesions 1.4 per cent) were in the extremities. In none of our four cases was the lesion in an extremity and they could not be considered favorable. In two of the cases a twisting of the shoulder was responsible for the onset of the scapular lesion.

MULTIPLE MYELOMA

TABLE XV.
MULTIPLE MYELOMA

AGE	SEX	DURATION
49	M.	Living 4 years
41	F.	Death 6 mos.
74	M.	Death 11 mos.

In each case many bones were involved and the presence of Bence-Jones protein in the urine was demonstrated. The last two cases were proved by autopsy examinations, and the first by biopsy. All three cases were of the plasma cell variety. Radiation caused temporary regression in the first two cases, and was not used in the last case because the patient was in a terminal state when admitted to the hospital (Table XV). Meyerding reported 41 cases, with 3.6 per cent five-year survivals.

ADAMANTINOMA OF TIBIA

This extremely rare tumor was encountered in one case (47-year-old white male). The tumor in the lower one-third of the right tibia had been present two months on admission to the hospital (Fig. 1). A history of a direct blow to the leg two months prior to discovery of swelling of the leg was volunteered by the patient. Local biopsy and curettage of the lesion was performed. Ewing examined the specimens obtained and made a diagnosis of adamantinoma. He recommended amputation above the knee. This was performed nine days after the local operation at the level of the lower third of the femur. Chest films taken at this time for evidence of metastasis were negative. The patient returned home and was apparently well for about two months. He then developed a chronic cough and hoarseness, but refused to submit to any further surgical procedures. Pleural effusion developed, and a mass could be felt over the upper left chest and the base of the neck. The patient died twenty-two months after the onset. X-ray examination of the chest made shortly before death revealed multiple massive lesions interpreted as metastatic tumors. It is most unfortunate that an autopsy was not obtained. No cases of adamantinoma of the tibia in which pulmonary metastasis has occurred have been located in the medical literature.

LIPOSARCOMA OF BONE

One case of primary liposarcoma of the bone was encountered in a 17-year-old colored male. A severe blow to the leg was sustained three months before admission. The lesion was osteolytic in character and an original diagnosis of osteomyelitis, both clinical and radiologic, led to the adoption of the Orr treatment. When fungation occurred shortly, amputation was performed at the mid-thigh, about six months after the onset. Death with metastasis to the lungs, kidney and to many other bones occurred eight months after the onset.

GIANT-CELL TUMOR OF BONE

This lesion was encountered 16 times. All patients were between 10 and 40 years of age (Table XVI).

TABLE XVI.
GIANT-CELL TUMOR

Bone Involved	No.
Maxilla	2
Mandible	2
Femur	4
Ulna	2
Fibula	2
Neck of Femur	1
Bones of Foot	3

Treatment was varied, depending somewhat on which department originally received the case (Table XVII).

TABLE XVII.
TREATMENT

Treatment	No
X-ray only	5
X-ray and local operation	2
X-ray and excision	1
Local operation only	2
Excision only	6

The results of X-ray therapy were satisfactory in approximately one-half of the cases. Others are still having occasional reactivations and pain. Several subsequently submitted to excisions. One lesion, involving the astragalus, was regarded as probably malignant. Astragalectomy was performed and the patient is well seven years following this procedure.

Meyerding reported seven cases regarded as malignant giant-cell tumors, with 83.3 per cent five-year survivals.

During this same period, 25 cases of benign osteochondroma and chondroma, and 32 cases of malignant muscle and fascia sarcoma were listed as proved cases in the hospital records.

SUMMARY

An attempt was made to analyze, in a critical manner, a series of 53 cases of primary malignant bone tumors selected from a total number of 93 bone tumors in general that have been observed at the Jefferson Medical College Hospital during the past 20 years. This included 43 cases of osteogenic sarcoma, four of Ewing's tumor, three of multiple myeloma, one of adamantinoma (tibia with pulmonary metastasis), one of liposarcoma and one probably malignant giant cell tumor of the astragalus.

Certain points in the diagnosis and treatment, relative to mortality, of each group were stressed with special emphasis given to arteriography as being superior to and safer than biopsy. The value of radiation as a supplement to amputation at the earliest optimum time is discussed.

CONCLUSIONS

1. The history of trauma in the majority of the cases in this series, together with its definite relationship in a certain few, makes it seem to play some rôle in the genesis of bone tumors.

2. The danger of spreading a malignant bone tumor by diagnostic biopsy may be overcome by substituting arteriography. By this latter procedure, one can determine the exact limits of the le

sion, distinguish the benign and the inflammatory from the malignant, as well as denote the stage of the malignancy.

3. When amputation is indicated, it should be performed at the earliest optimum time, rather than as soon as the diagnosis has been made. This view will probably undergo revision if and when arteriography is universally used in place of biopsy.

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SUMARIO

Se ha hecho un intento de analizar, de una manera detallada, una serie de 53 casos de tumores malignos primarios de huesos selecionados de un numero total de 93 casos de tumores oseos en general que han sido observados en Jefferson Medical College Hospital durante los ultimos veinte años. Esto incluyó 43 casos de sarcoma osteogenico, 4 tumores de Ewing, 3 mielomas multiples, 1 adamantioma (tibia con metastasis pulmonares), 1 liposarcoma y 1 probable tumor maligno de celulas gigantes de el astragalo.

Ciertos puntos en el diagnostico y tratamiento, relativos a la mortalidad, de cada grupo fueron estudiados dando especial enfasis a la arteriografia como mas segura y superior a la biopsia. El valor de las radiaciones como un suplemento de las amputaciones en el primer momento optimo es discutido.

RÉSUMÉ

L'auteur analyze d'une manière critique une série de 53 cas de tumeurs malignes primaires des os. Ce total fut choisi de quatre-vingt-treize cas étudiés au Jefferson Medical College during les dernières vingt années. Il est inclus dans cette série 43 cas de sarcome ostéogénique, 4 de tumeur Ewing, trois de myélomes multiples. Un cas d'adàmantinome (tibia avec métastase pulmonaire), 1 liposarcoma et un cas de tumeur maligne de cellules géantes de l'astragale. L'auteur discute le diagnostic et le traitement de ces tumeurs. Il envisage l'arteriographie comme préférable à la biopsie. La valeur de la radiation comme supplément à l'amputation aussi tôt que possible est considérée.

Выводы

Серия 53-х случаев злокачественной опухоли кости, избранных из группы 93-х случаев опухоли кости, подверженных лечению в период последних 20-ти лет в Джефферсон Колледж Госпиталь, заключала в себе 43 случая остеогенной саркомы, 4 случая опухоли Екинг'а, 3 множественной маеломы, 1 адаментомы (большеберцовой кости с легочными тазами), 1 случай липосаркомы и 1 случай злокачественной опухоли гигантских клеток таранной кости.

Оказалось, что артериография дала более точные показания, чем биопсия. Также подчеркивается как можно раннее облучение после ампутации.

Advances in Heart Surgery[*]

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THE operative treatment of the heart has a special position in surgery. When Rehn successfully sutured a heart wound for the first time 47 years ago, it was considered a decisive event in the development of surgical technic.

EXPERIENCES IN THE TREATMENT OF HEART WOUNDS

Operations on the heart must be performed under conditions which are unique in the organism. The continuous and powerful motion of the heart muscle prevents smooth and systematic operative performance. Speed and utmost concentration in every detail of manipulation are of importance.

According to various statistics the mortality of heart wounds surgically treated is about 50 per cent. My figures[*] are somewhat more favorable. Of seven patients operated on (one with a stab wound of the bulb of the pulmonary artery, which was not a heart wound in a restricted sense), five recovered; two patients died—one 16 days after operation of a purulent pericarditis and pleurisy, and the other 16 hours after operation. In this latter case there were two gunshot wounds. One of the bullets had left the body on the posterior wall of the right auricle, and since I was unable to find this spot, the patient died from hemorrhage following operation.

In considering the clinical symptomatology of heart wounds, it must be stressed especially that in about 40 per cent of all cases we do not find the well-known signs of progressive blood loss, but rather those of tamponade of the heart.

The period of time during which a critical tamponade of the heart develops may vary considerably. *One generally overestimates the urgency of surgical intervention.* It may take hours or even days until the strangling of the circulation within the heart has reached the danger point. This means that in most cases there is sufficient time to carefully perform a clinical and X-ray examination. The statement which may be found in most textbooks that perforating wounds of the heart may heal spontaneously is only of problematic value. Such a happy ending should not be expected, and there do not exist any clinical signs which warrant such a hope. It would be especially hazardous to expect a spontaneous cure in cases of definitely proved hemopericardium because of favorable values of pulse and blood pressure, for in almost every case of tamponade of the heart the onset of circulatory failure is quite sudden. Very often the so-called typical prodromal stage of arrhythmia of the pulse is absent.

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[*] Presented at the Third International Assembly of the International College of Surgeons held in Mexico City, August, 1941.

[*] Schweiz. Med. Woch. 67:861, 1937.

sufficiency, is a double-edged weapon. By the removal of the pericardium, the already dilated right ventricle might very well be unburdened temporarily by further dilatation without the left ventricle being able to take up or to eject the increased amount of blood which now reaches it from the right heart (experiments by Wiggers, Roessler and Unna, Winiwarter). The fact that the left chamber does not dilate under these circumstances as well is easily explained by the difference in the thickness of the ventricular wall. As a result a dangerous congestion of the walls occurs which is the forerunner of acute circulatory failure. In cases of lesions of the aortic valve the conditions are the same. Thus the uselessness of pericardiectomy has already been proved by animal experiment. Furthermore, I have not been able to find any reports in the literature of operations on human beings. It, therefore, would seem that no successful attempt has as yet been made.

Felix has also performed experiments to influence aortic stenosis and arterial hypertension by increasing pericardial counter-pressure. The surgical procedure consisted in tightening of the pericardium and in phrenicotomy. The tightening of the pericardium might well temporarily increase its protective function—the safeguarding of the ventricles against overstretching. But it seems that even Felix himself doubts whether this procedure is of any practical importance. It would be an equally unfounded assumption to presume that phrenicotomy, this surgical Jack of all trades, causes a rise of the pressure which is exerted on the heart from outside. We know from experience that the intrapleural pressure does not change after phrenicotomy. In experimental arterial hypertension, 80 per cent of the animals exhibit a dilatation of the heart, while only 20 to 25 per cent show this dilatation if a phrenicotomy has been performed simultaneously with the production of high blood pressure. This fact, however, can hardly be explained by a decrease of the traction of the lung or, in other words, by an increase of the external pressure which, as we have said, does not occur.

We are, therefore, forced to the conclusion that the treatment of valvular lesions by operations inside and outside of the heart neither produces unequivocal success nor does it show any promise for the future.

OPERATIVE TREATMENT OF MASSIVE PULMONARY EMBOLISM

Another surgical intervention, namely, the opening up of the intrapericardial section of the pulmonary artery for the removal of massive pulmonary embolism, can be considered nowadays less of a technical than a clinical problem. I need not dwell upon the ingenious idea of Trendelenburg and its technical aspects.

After the first successful case of Kirschner, the lives of eight more patients were saved through the skill of Meyer and Nystroem and Crawford. Each had operated successfully upon two more patients and this operative procedure gained popularity. But today the enthusiasm has ebbed. In 1932, Eichelter reported a review of 160 cases from the literature, of which only 9 survived. The actual number of failures might even be far greater. Even if t
mortality rate were more
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very experienced diagnostician is subjected.

The indication for Trendelenburg's operation in itself leads to a vicious circle. If we restrict the operation to patients in the terminal stages then success will be very rare indeed and more or less the result of mere chance. If, on the other hand, we operate prior to this final stage, we have to consider that now and then a patient who might have recovered spontaneously may lose his life by operation. We cannot entirely reject the opinion of some surgeons who claim that more patients have died on account of Trendelenburg's operation than have been saved through it. We, therefore, feel that a policy of waiting until the last moment would be best from the clinician's point of view.

This critical way of looking at the matter must not be misunderstood. In ch a situation the surgeon will be ded by his conscience and his feeling responsibility. The dreadful event pulmonary embolism weighs especially heavy on the mind of the surgeon who is far more of a direct tool of therapy than the medical man. His wish to avert this doom by early operative measures is easily understood. Anyone who has often been in such a state of conflicting emotions will not confuse criticism with blame.

was to be expected, therefore, from the artificial production of an adhesive pericarditis for the development of new arterial routes of supply.

In numerous animal experiments, Beck, Tichy and Moritz fastened pedunculated lobes of muscle of the anterior thoracic wall, as well as omental flaps which had been passed through the diaphragm to the anterior wall of the left and right ventricle. In that way an improved blood supply to the endangered myocardium was to be obtained and the formation of anastomotic routes between the right and left coronary artery was to be facilitated. The results of the animal experiments were encouraging; while the fatality rate of right coronary ligation was 70 per cent in normal animals, it was 33 per cent if the above described operation had been performed several months previously.

Beck, after some hesitation, therefore, decided to employ the method of a pedunculated muscle graft in patients suffering from severe coronary sclerosis. Among 11 operations there were 5 cases of postoperative death and 4 remarkable improvements.

O'Shaughnessy also accepted the idea of omentopexy and likewise studied it experimentally. He arrived at similar conclusions as Beck, Tichy and Moritz. His results are remarkable. In six patients on whom he performed the cardio-omentopexy, two died of complications which had no direct connection with the operation. One patient died seven days postoperatively of a duodenal hemorrhage, the other three months postoperatively of uremia. In three case the clinical result was quite satisfactory.

A third series of experiments was made by Lezius. He produced adhesions between the heart and the left lower lobe. After a few weeks he succeeded in filling the coronary vessels by means of injecting the vessels of the lung.

The results of Beck's operation are not encouraging. He questions whether this operation can have any further development.

The omentopexy undoubtedly brings about a better vascularization. It is *astonishing that the opening of three body cavities was well tolerated by* O'Shaughnessy's patients, some of them being elderly and very ill.

Lezins' method of procedure requires *further proof. The* question of the nature of the new blood supply has yet to be cleared up. Only those vascular connections which originate in the territory of the bronchial arteries and of the pulmonary veins are to be considered as being of full value.

It is a moot question, nevertheless, whether or not these operations are of value. O'Shaughnessy, who had a great deal of experience in this field, was looking *forward to* still greater successes to be brought about by the perfection of the technic (mechanical or chemical irritation of the epicardium aimed at developing new vessels on a larger scale). O'Shaughnessy's early death (he was killed in action in May, 1940, in Flanders) has prevented a further development of this method. Recently, there has been more disinclination to accept this *type* of treatment, but criticism, as a rule, was not based on personal clinical *observations.*

On the whole, it should be stated that the animal experiments are not utterly convincing and a small number of operations on human subjects does not per*mit* a definite decision as to whether this treatment is superior to other methods.

THE OPERATIVE TREATMENT OF SEQUELÆ OF PERICARDITIS

In the operative treatment of the late consequences of pericarditis or mediastino-pericarditis we are on more solid ground. We need not discuss the anatomic and clinical pictures of the various gradations or the forms of *localization* of pericardial fibrosis. *In order to* proceed methodically, it is necessary to decide by clinical examination whether the heart action is impeded by pericardial adhesions or by fibrous construction. In the first group, in those cases where the fibrous mediastinum has firmly attached the heart to the anterior chest wall, or where the organ, as a consequence of pericardial shrinking, has been pulled to the *right or left side,* the indication for *thoracolysis* is given.

The *area where the* extrapleural rib *resection is to be performed* cannot be *determined* schematically. In some forms of shrinking fibrocavitarian pul*monary* tuberculosis *an* extensive paravertebral *thoracoplasty is the best* method to free a heart which has been drawn aside by mediastinal fibrosis. In other cases in which the *systolic* retraction of the *parasternal* chest wall indicates the *fixation of the heart to the* interior wall *of the chest, the typical* precardial thoracolysis produces the desired result. A *condition for a favorable* final result is the absence of thick intrapericardial adhesions. If *they are pres*ent—and, as a matter of fact, in many cases we find both mediastinal pericarditis and the fibrous internal pericarditis —only Delorms operation of "peeling of the heart" remains possible, a *pro*cedure whose dangers cannot be underestimated, and whose final results are, unfortunately not as favorable as would appear from the literature. It is easily understandable that one prefers to publish the good results. In most cases, at the time when the surgeon is consulted, the disturbance of the heart action cannot be explained by the hindrance to inflow alone. The growth of the *connective* tissue spreads to the heart muscle. The ability of the muscle to perform work, therefore, becomes diminished. For technical reasons alone, it is, in most cases, necessary to limit the decortication to the anterior wall of the ventricles; but it is questionable whether the radical excision of the thick adhesions in this limited area would be appropriate at all.

In my own experience, which comprises five cases of decortication of the heart, we had only one completely successful result. This was the case of an 8-year-old child who had a thick fibrous pericardial coat due to a tuberculous pericarditis. The edema and the dyspnea disappeared; three years later at reexamination we saw a healthy well-developed boy. In two operations the patients benefitted only temporarily. They died three and five months later. The condition of the fourth patient remained unchanged: however, he did not die until nine months later. In the fifth case a erious operative accident occurred—the ght ventricular wall was opened and he patient died three weeks later of a hemorrhage due to septic erosion of a vessel.

OPERATIVE FREEING OF THE HEART IN CASES OF EXTRAPERICARDIAL NARROWING OF THE CHEST CAVITY

toris, attacks of cardiac dyspnea, constant pressure in the heart region, pains on change of position, complaints corresponding to esophagospasm and cardiospasm are very common. For easily understandable reasons, pathologic conditions which encroach upon the heart from the right side are to be noticed at an early time and in a very marked degree.

Deformities of the thoracic cage influence the action of the heart both directly and indirectly as well as by dislocation of the sternum. In the individual case it is often impossible to decide whether the cardiac disorder is caused directly by pressure on the heart or indirectly by stiffening of the chest wall. The inevitable rigidity of the thorax impedes pulmonary circulation which, in turn, has an unfavorable influence on heart action. The operation must always consist in a loosening of the thoracic cage. Chondrotomy, which was recommended by Freund 80 years ago for the treatment of pulmonary emphysema, and later was discontinued, finds its justification here. In extreme degrees of pectus carinatum, chondrotomy is very effective. Sumultaneously with the beneficient facilitation of pulmonary circulation, the heart which, before had been compressed from both sides, is directly relieved by this operation.

Similar conditions prevail in cases of funnel chest. However, the mobilization of the thorax alone is not sufficient, for the depressed sternum has to be elevated as well. To attain this result, we have introduced an operation which elevates the sternal bone after it has been freed by permanent extension and fixes it in this improved position. Ombredanne, Garnier and Mathieu have confirmed the usefulness of this method on several patients. Their modification of the extension apparatus simplifies the treatment.

We find the greatest effect of extra pericardial pressure in acute conditions which put the whole mediastinal space under increased tension. The classical example of this is seen in mediastinal emphysema. In cases of lesions of the trachea and of the great bronchi, occasionally also as a consequence of an attempt at artificial pneumothorax (through causing a lesion of the lungs in obliteration of the pleural space), air enters the mediastinum. In a short time the whole pericardium is surrounded by an air cushion which stands under great pressure. The resulting circulatory disturbance corresponds in all respects to that of tamponade of the heart (as shown in experimental investigations by Jehn and Nissen). Both venæ cavæ are strangled in their extrapericardial course. The danger of immediate death here is no less than in a case of hemopericardium. An exact knowledge of the mechanical background of this very severe condition is more important as the life saving release of pressure on the heart can be obtained by means of simple operative intervention. An incision in the jugulum is sufficient to open a way for the escape of the air compressed in the mediastinum. The reports in the literature about the expediency of this decompression in mediastinal emphysema are unanimously favorable.

GASTROCARDIAL SYNDROME, EPIPHRENAL SYNDROME

There has been much discussion regarding the disturbances which have been summarized under the terms of gastrocardial and epiphrenal syndrome. Von Bergmann's opinion that the sudden dilatation of the parts of the esophagus or of the stomach which are in close vicinity to the heart could mechanically irritate the fibers of the vagus nerve and thus induce a constriction of the coronary arteries has been much disputed.

As a matter of fact, we fairly often find these anginal conditions in patients with cardiospasm and so-called hernia of the hiatus esophagus. Nevertheless, one gains the impression that these clinical conditions are coordinated spastic phenomena and are due to a nervous disturbance of central origin. This is borne out by the fact that the anginal symptoms persist in spite of therapeutic dilatation of the cardia or of the surgical establishment of an esophago-gastrostomy. In contrast to the "spastic" type, a peculiar form of an atonic type exists.

We encountered that type for the first time in a patient with megaesophagus who had arterial hypotension and an enormous dilatation of the esophagus, for which no explanation in an impediment in the cardia could be found. Even thick bougies got by without difficulty. Since this case was reported, we have seen two more patients with atony of heart and vessels associated with megaesophagus.

The knowledge of this condition is important from the surgical point of view. The weakness of the heart in these patients forbids any major operation. Furthermore, surgical treatment is of no use in this condition as here the dilatation of the esophagus is by no means the consequence of an organic or functional stenosis.

ORGANIC DISEASES OF THE HEART AND THYROIDECTOMY

Let us now say a few words about attempts to influence different sorts of organic heart disease by total thyroidectomy. It is the more futile to go into details about the theoretical bases of this operation as they have been greatly disputed until lately. Those authors (Blumgart and Levine) who, for the first time, advocated this operation believe that its success is due to the decrease of oxygen consumption and to the reduction in the adrenalin output which follow the removal of the thyroid.

From the clinical point of view, we might call these effects of thyroidectomy a kind of compulsory rest cure. In a symptomatic treatment of this kind we could not expect an improvement of the organic changes to take place in the heart, nor has this claim been made by any of the authors. With regard to the general rules of operative indication, the following questions therefore arise.

(1) Is the objective relief brought about by this not quite harmless procedure so very definite that we should feel entitled to perform the operation?

(2) What are the late endocrine results of total thyroidectomy with regard to myxedema and postoperative tetany?

(3) Can we produce the result of total thyroidectomy by subtotal operation?

The answers are:

(1) The condition of patients operated on for severe valvular lesions shows, as a rule, a dramatic improvement. Occasionally, a restoration of activty has been observed for a longer period of time. In angina pectoris there has been a great deal of controversy about the therapeutic results. The fatality rate of the operation has been unanimously reported to be from 6 to 8 per cent. Therefore, at least in angina pectoris, some very definite reservations with regard to the clinical results obtained have to be made.

(2) When the first reports about this therapy had been published, it appeared as though our theories about the relations between thyroid gland and myxedema would have to undergo a revision. Mandl reported in one of his papers that there were scarcely any or no signs of postoperative myxedema. This optimistic view is greatly in contrast to the findings of Berard on Cutler's patients, of whom 25 per cent exhibited severe signs of myxedema, while 50 per cent had mild signs of hypothyroidism and 10 per cent needed thyroid extract in spite of the absence of pronounced symptoms. The objection undoubtedly could be raised that in the majority of the cases there was no serious myxedema present, but even in mild cases where there were no other symptoms but a reduction of their intellectual capacity, the patients felt very uncomfortable. Quite a few gladly endured the recurrence of anginal attacks after thyroid extract if they could get rid of the myxedema.

The hypercholesterolemia, which very often accompanies myxedema, must further cause some misgivings whether in the last resort the arteriosclerotic vascular changes might not be increased by thyroidectomy.

The prevention of tetany in the first place depends on the precision with which the surgeon operates. One must admit, however, that it is often very difficult to avoid the extirpation or severe damage of the parathyroids during the performance of a total thyroidectomy. If less than all four parathyroid bodies have been removed, latent tetany may develop, which becomes manifest only if certain chemical conditions are present in the organism.

Total thyroidectomy, therefore, is anything but harmless in its endocrine consequences.

(3) The situation would be entirely different if by subtotal resection of the thyroid we could produce the same result as by total extirpation. Some cases have been reported in which the ligation of the thyroid arteries alone was successful (Horgan, Zak).

THE SURGICAL TREATMENT OF PATENT DUCTUS BOTALLI

The ligation of a patent ductus Botalli is an operative task which surely has stimulated the desire of every surgeon. Here restraint was not due to diagnostic difficulties or to technical considerations, but only to the fact that cardiologists used to remind us again and again that patients with a patent duct scarcely ever show serious clinical symptoms or, as a rule, were their lives in danger (likewise with septal defects). It further was said that these patients—about 30 per cent—who are apt to develop an endocarditis in the region of the abnormal opening, would retain this tendency of the endocardium even if an operation had been performed.

The first ligation of a patent duct by Gross in 1939 was followed by a great number of like operations. The time for the follow-up study had been altogether too short to ascertain whether we really are able to prevent an endocarditis by this procedure.

This operation has been performed even when endocarditis was present in the hope of curing the endocarditis. It stands to reason that under these circumstances the fatality rate of this operation, which otherwise presents only small danger, rises appreciably. As far as I have been able to survey the literature, the expected result—the cure of the endocarditis—has already been reached in a few cases. Whether the cure is permanent remains to be seen.

SUMMARY

The author mentions his experiences and results in different types of operations performed on the heart and pericardium. He also mentions the influenc of total or subtotal thyroidectomy o cardiac affections. Much of the wor mentioned belongs to the experimenta stage as a matter of fact, surgery of th heart is still in the experimental stage.

SUMARIO

En este trabajo el autor hace mencion de sus experiencias y sus resultados en los distintos tipos de operaciones practicadas sobre el corazon y el pericardio asi como de la influencia que la tiroidectomia total o subtotal puede tener como tratamiento en las afecciones cardiacas. Gran parte de el trabajo reportado pertenece todavia al estado de experimentacion; ya que toda la cirugia de el corazon es aun mas una esperanza que una realidad.

RÉSUMÉ

L'auteur relate ses expériences et ses résultats obtenus par differents modes opératoire sur le coeur et sur le péricarde. Il mentionne aussi l'influence exercée par la thyroidectomie total ou sous-totale sur les cardiaques. Beaucoup de ce que l'auteur nous rapporte est encore au stade expérimentale. En vérité la chirurgie du coeur est encore à la période expérimentale.

Выводы

Автор сообщает его результаты разных операций на сердце и перикард, а также и влияние тотальной или субтотальной тироидектомии на сердечные заболевания. Все что было им переработанно представляет собою экспериментальную фазу. Хирургия сердца все еще находится в той же экспериментальной фазе.

The Surgical Treatment of Cancer of the Larynx*

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IT MUST be admitted that surgical treatment has the best statistical results to show in the treatment of cancer of the larynx, but there are cases in which the patient may be allowed to choose irradiation instead of surgery, or in which the laryngologist may even feel justified in advising irradiation.[1] In a paper to be published in the near future,[2] the criteria for the selection of treatment are considered at length, but in this paper I shall merely summarize the indications for surgery, and then outline the technics of the operations of laryngofissure and laryngectomy as we are doing them at the present time.

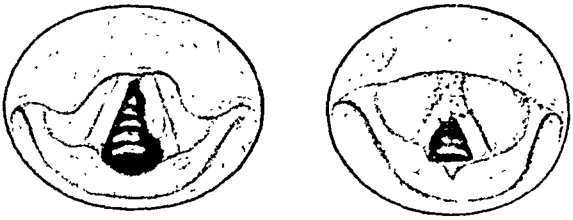

Fig. 1. Mirror appearance of lesions suitable for laryngofissure. (*A*) A lesion involving the middle third of the cord, for which the "clipping" operation would be used. (*B*) A lesion in the anterior commissure, which would require the use of the "anterior commissure" technic.

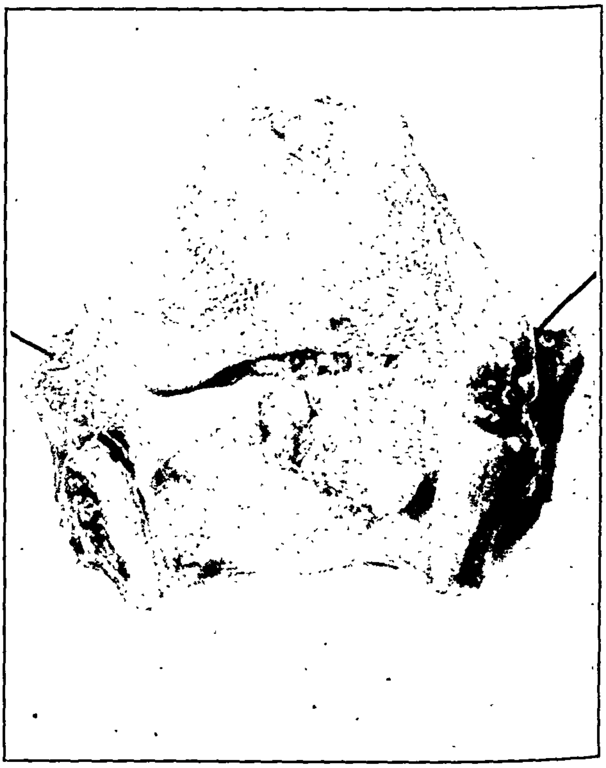

Fig. 2. Subglottic cancer of the larynx for which laryngectomy was done. Lesions of this kind cannot be satisfactorily extirpated by laryngofissure, and the results of irradiation are not good.

SURGICAL INDICATIONS

Lesions occupying the middle third of the vocal cord are suitable for the operation of laryngofissure by the "clipping" technic, regardless of histologic character or grading.

Lesions reaching the anterior commissure and even involving the opposite cord are amenable to extirpation by the laryngofissure route also, but in such cases the "anterior commissure" technic should be used. The histologic character may possibly influence us in deciding between the "clipping" operation and this one, or between the "anterior commissure" operation and total laryngectomy (Fig. 1).

Lesions in which the growth is cordal, but has reached the posterior end of the cord and produced impairment of motility, or has extended subglottically, call for total laryngectomy (Fig 2). In some of the cases in which the lesion is too extensive for extirpation by laryngofissure but motility is not impaired, irradiation may be tried instead of total laryngectomy.

Lesions involving the ventricles, the ventricular bands, or the base of the epi-

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*Presented at the Third International Assembly of the International College of Surgeons held in Mexico City, August, 1941.

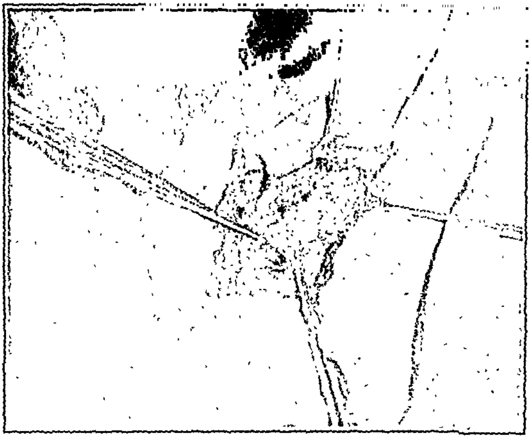

Fig. 3. The operation of laryngofissure. The cricothyroid membrane has been incised preliminary to the division of the thyroid cartilage. Cocaine, 10 per cent, or pontocaine, 2 per cent, is applied topically through this incision in order to anesthetize the interior of the larynx and the upper trachea. The next step would be the division of the thyroid cartilage by means of shears if the "clipping" technic is used, or by the circular saw if the "anterior commissure" technic is used.

glottis may be treated by either laryngectomy or irradiation.

In the case of lesions whose location and extent are such as to make them borderline cases for decision between laryngofissure and laryngectomy, the higher the grade the more radical should be the surgery. In other words, we might easily decide to do a laryngectomy instead of a laryngofissure in a case in which the lesion was considered of maximum extent for laryngofissure, and the histologic character was of Grade III, while if the latter were of Grade I or II, laryngofissure would be deemed justifiable.

Laryngectomy and partial pharyngectomy may be done in cases in which the lesion is "extrinsic," but the results in these cases are very unsatisfactory, and it is probable that irradiation will accomplish as much in arresting the growth and prolonging life. On the other hand, in some of the extensive cases, especially in those with cartil[illegible] involvement or perichondritis, [illegible] may be some advantage in removin[illegible] larynx preliminarily, and then fol[illegible] immediately with intensive irra[illegible]

Perhaps we should add, at th[illegible] that while the presence of [illegible] metastasis contraindicates [illegible] tervention in the form of la[illegible] or total laryngectomy, it [illegible] for neck dissection and ra[illegible] tion, preceded by a full [illegible] ments by [illegible] ir[illegible] tion. If the irradiation [illegible] ly followed by this [illegible] the [illegible]

[illegible] OF L[illegible]

The results of [illegible] in the Temple [illegible] line of the neck, supplemented by topical application of cocaine 10 per cent to the interior of the larynx and upper trachea on a swab introduced through an incision in the cricothyroid membrane. A straight vertical midline incision is made from just above the level of the thyroid notch to just below the level of the cricoid cartilage. If tracheotomy is to be done, the incision may be prolonged downward to the suprasternal notch. We do not do tracheotomy as a part of the operation, though it has been necessary occasionally in order to permit packing because of hemorrhage.

As soon as the incision has been made, the cartilages exposed and hemostasis accomplished, a special cover consisting of a sheet with a slit in it is put in place, and the edges of the opening clipped to the skin margins of the wound. This cover helps to maintain scrupulous cleanliness and avoid skin contamination, particularly during the manipulation of the cartilages. After placement of the special cover, the cricothyroid membrane is incised, either transversely or vertically, for the topical application of cocaine to the interior of the larynx (Fig. 3).

In cases in which the lesion does not reach the anterior commissure, the "clipping" technic is used (Figs. 4 and 5), dividing the thyroid alæ exactly in the midline with shears, but in cases in which the lesion reaches the anterior commissure, the special technic for such cases first described by Chevalier Jackson[5] in 1922 is preferable. The essential feature of this technic is the division of the thyroid cartilage from the outside by means of an electrically driven circular saw, or a knife in the case of patients with a very soft cartilage. This incision does not go clear through the internal perichondrium, and in this way we avoid cutting through the tumor (Fig. 6). In a series of ninety-nine laryngofissures done at the Temple Clinic between 1930 and 1940, the clipping technic was used

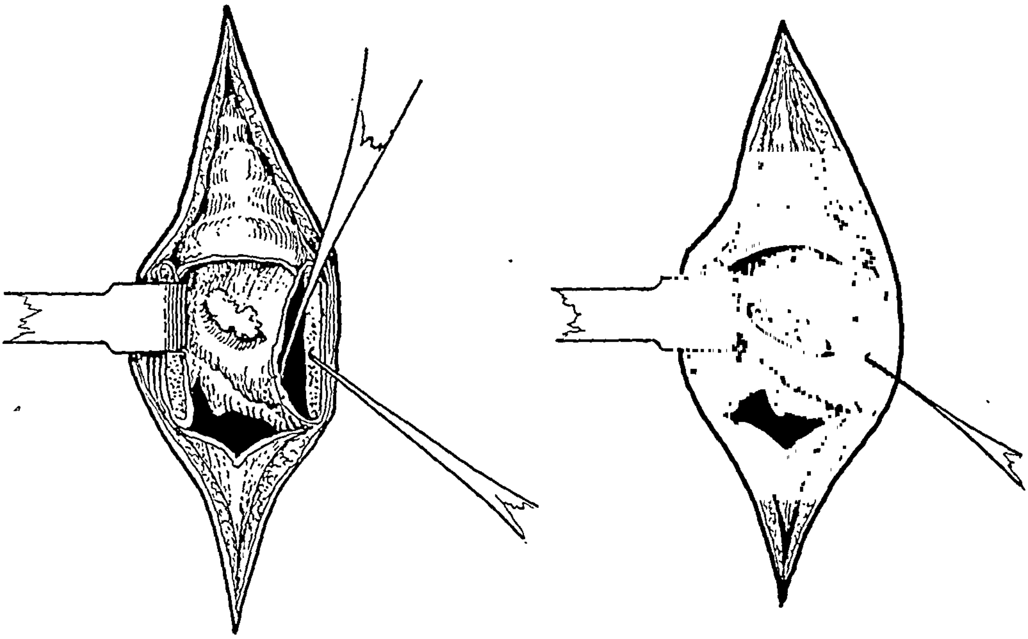

Fig. 4. Laryngofissure by the "clipping" technic. Note the exposure of the lesion obtained and the method of subperichondrial dissection used. (*From Jackson and Jackson: Cancer of the Larynx, W. B. Saunders Co.*)

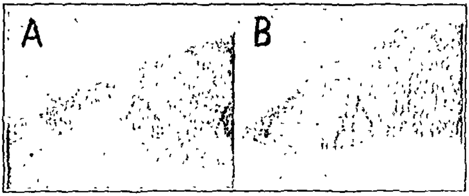

Fig. 5. Photographs showing the postoperative appearance in two cases in which the right vocal cord was removed by laryngofissure. Note that in both cases a fairly good "adventitious" cord has formed, with which the remaining normal cord can approximate.

in a little over one-half of the cases (54 per cent), and the "anterior commissure" technic in the remainder (44 per cent). Of the fifteen recurrences in this series, about one-half were in patients who had been operated upon by the one technic, and about one-half in patients operated upon by the other.

If the patient has been properly studied beforehand by direct as well as indirect laryngoscopy, one should have a very accurate idea of the location and extent of the lesion, but after the larynx is opened it should again be carefully examined, before the excision is begun. In the clipping operation this is simple, but in the anterior commissure operation it is a little more difficult. In the former, we can inspect the lesion before doing even the subperichondrial dissection, but in the anterior commissure cases it is necessary first to separate off the internal perichondrium on both sides and then to section vertically the less involved cord and ventricle so that it can be reflected in such a way as to permit good visualization of the entire interior of the larynx. This careful inspection permits one to decide upon the extent of *excision necessary to give a safe margin* of normal tissue around the growth.

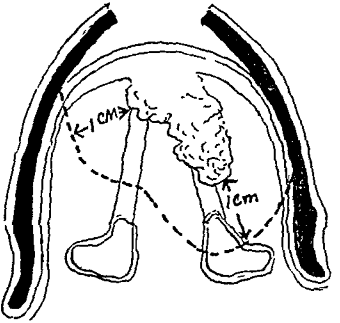

Fig. 6. Laryngofissure by the "anterior commissure" *technic. After division of the thyroid cartilage* from the outside, using the circular saw, the soft tissues are separated by subperichondrial dissection from the inner surfaces of the thyroid alæ; then the less involved cord is divided and reflected in such a way that a thorough inspection of the interior of the larynx is permitted before the completion of the excision of the tumor and a sufficiently wide margin of surrounding normal tissue. *(From Jackson and Jackson: Cancer of the Larynx, W. B. Saunders Co.)*

After subperichondrial dissection the tumor-bearing mass is excised with special curved scissors, generally including the tip of the vocal process of the arytenoid on the more involved side. In the case of strictly cordal growths, I feel that it is not necessary to include the ventricular band, but a portion of the ventricle should always be included.

Plain or iodoform gauze is tucked into the open larynx immediately after the excision, while the operative specimen is inspected, and most of the bleeding will generally stop with this alone. If a spurting vessel can be caught quickly with a hemostat, so much the better, because later it may retreat and be difficult to find. The larynx dry before closing, or postoperative bleeding will surely occur. If the excision has been rather extensive, including one or both ventricular bands, the base of the epiglottis will be left without support and should be stitched forward as suggested by Gabriel Tucker. This will tend to prevent stenosis anteriorly.

The fascia and muscles are closed with buried sutures (alloy steel wire) and the skin with Michel clamps. No sutures are put through the perichondrium or cartilage and no drainage is used. A plain flat gauze dressing is applied; the first layer moistened with compound tincture of benzoin. The dressings are changed daily, and the clips removed on the third or fourth day.

The patient is kept sitting up, or rather with the head of the bed elevated. He is forbidden to talk and instructed to use pad and pencil to express himself. After a few hours he is given liquids and soft solids, being encouraged to sit up, an slightly forward and take a good wallow rather than sipping, or sucking the liquid through a glass tube. In none of our cases has a feeding tube been necessary, but if an extensive excision is made, especially if the arytenoid is removed, it may be necessary to use a feeding tube. Opiates are contraindicated, and only the very mildest sedation is permissible. The wound is generally healed externally in four or five days, but the healing of the interior takes several weeks. Most patients are discharged from the hospital in from one week to ten days.

LARYNGECTOMY

In the past decade many operators have reported series of cases of cancer of the larynx treated by laryngectomy. Subperichondrial skeletonization as advised by Crowe and Broyles is an extreme manifestation of the present trend toward what we have called the "narrow-field" type of operation. The conservation of muscles and their overlapping in closure is another feature of this technic.

The essential features of the "narrow-field" technic we are now employing at the Temple University Clinic are the use of a simple midline incision, and skeletonization with a minimum of section or removal of muscles. The larynx may either be taken down from above or up from below. Tight closure of the pharynx is obtained by interrupted sutures of 000 chromic catgut, reinforced with a second row of 00 chromic catgut. The muscles are overlapped or "imbricated" to give maximum support to the pharynx.

This technic has been described in the book "Cancer of the Larynx" by Jackson and Jackson,[3] and more recently in a paper by Jackson and Norris,[6] but it seems appropriate at this time to review systematically the principal steps in the procedure as it has been carried out in a series of over forty consecutive cases without an operative death, in a period of about two and one-half years.

Elimination of oral sepsis has been regarded as the first step in the preparation of patients for operation. Every patient is referred to the dental department for examination, and in cases in which the dentist advises extractions, they are carried out, while in the other cases prophylaxis is administered. All patients are given a perborate mouth wash. If the patient is edentulous, so much the better.

In most cases avertin anesthesia is used, but a few operations have been done under local anesthesia alone. Dilaudid, gr. 1/32, has been found to be efficient as a supplementary sedative toward the latter part of the operation, but intravenous sodium pentothal has proved ideal as a supplementary anesthesia.

A simple midline incision is made. The ribbon muscles in most cases are left in, but occasionally the inner muscles (sterno-thyroid and thyro-hyoid) are removed with the larynx. Subperichondrial dissection is used whenever convenient, especially at the muscular attachments.

The hyoid bone, or at least its body, may be removed, and the pre-epiglottic tissues are excised along with the larynx if they are suspected of involvement by the neoplasm. Removal of the hyoid, or at least of its midportion, greatly facilitates removal of the pre-epiglottic space, and it also facilitates closure of the pharynx if the entire epiglottis is removed. On the other hand, in cases in which the lesion is cordal or subglottic, we see no advantage in removing the whole epiglottis or the hyoid. In such cases a transverse incision is made through the epiglottis in its mid-portion, and the tip left *in situ* (Fig. 7).

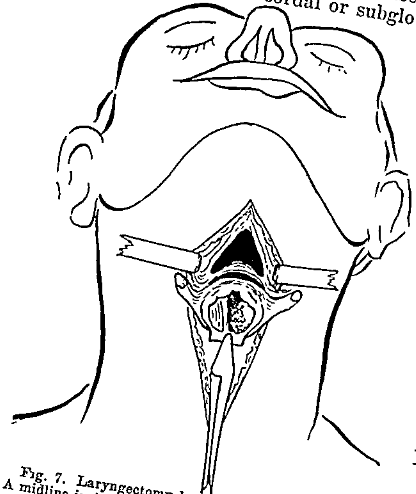

Fig. 7. Laryngectomy by the narrow field technic. A midline incision is used, and the ribbon muscles are not removed. The larynx may be taken down from above as shown here, or it may be taken up from below. Unless the hyoid bone is removed, the epiglottis is generally amputated through its middle third and the tip left *in situ*. This is not done in cases of supra-glottic tumors. In such cases the entire epiglottis, pre-epiglottic space and hyoid bone are removed, as advocated by Bisi.[7]

Cricoid conservation is a debatable point, the advantage of retaining the cricoid or a portion of it being that it aids in maintenance of a good stoma, thus obviating the necessity of permanently wearing a cannula. Objections are that section of the cricoid causes annoying bleeding, and, of course, that one may be tempted to make the amputation too close to the lesion, thus increasing the risk of recurrence.

Closure of the pharynx is accomplished by very careful approximation of the edges of the mucous membrane with interrupted sutures of 000 or 00 chromic catgut, reinforced with a second row. The line of closure may be either transverse or vertical (preferably the former), or in some cases in the form of the letter "Y." The fibres of the inferior constrictor are united for additional support, and the ribbon muscles are overlapped or "imbricated," as suggested by Crowe and Broyles and as advocated also by Hayes Martin.

I have been very much interested in the new technic of amputation of the larynx and closure of the pharynx by means of a special clamp which makes it possible to close the pharynx without opening it, so to speak. This procedure and this instrument are described by Vasconcelos and Barretto[8] of São Paulo, Brasil.

Drainage is afforded by a single small glass elbow tube as a "sump," as suggested by Wayne Babcock. This small tube is inserted under the muscles, and the skin closed around it, taking care to establish a good bridge of skin between the "sump" and the tracheal stoma. (In some cases we have all[illegible] an uncut bridge tween the lower end of the incision and the stoma, the latter being made by a stab wound and cutting out of a circular piece of skin.) A small catheter is inserted into the glass tube, and the negative pressure is continuously applied to the catheter by means of a small "flea power" electric pump. This form of drainage is absolutely non-irritating and it accomplishes the removal of a large quantity of serum from the wound during the first day or two after operation, thus reducing tension in the wound and eliminating material which would afford a good culture medium for the growth of bacteria.

A feeding tube is inserted through the nose after closure. In some of the cases a short catheter is used, in others a regular long *Levin* tube. The feeding tube is left in for varying periods of time, usually until the second afebrile day, provided there is no leakage when sterile water is given by mouth. In our series of over forty cases, there were only seven in which a pharyngeal fistula developed, and these closed spontaneously in an average of about nine days. The periods of hospitalization varied from ten days to one month.

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SUMMARY

A recent analysis of the end-results in a series of over one hundred patients with cancer of the larynx treated during the period from 1930 to 1937, inclusive, showed that in 59 determinate cases in which laryngofissure was done, an 80 per cent five-year cure rate was obtained, while in 48 cases in which laryngectomy was done for an intrinsic lesion, 69 per cent obtained five-year cures. The nine patients with extrinsic lesions who were treated by laryngectomy all died. Therefore, we may say that of the one hundred and seven patients with intrinsic lesions who received surgical treatments by either laryngofissure or laryngectomy, 80 patients, or about 75 per cent, obtained at least a five-year cure. During the same period, thirty-four patients were treated by irradiation (deep X-ray therapy, protracted fractional technic), 22 of them intrinsic and 12 extrinsic, and in the intrinsic group a 59 per cent five-year cure rate was obtained. Incidentally, in the extrinsic group a 25 per cent five-year cure rate was obtained, whereas, as mentioned above, none of the extrinsic cases treated surgically survived.

SUMARIO

En este articulo el autor hace una sintesis de las indicaciones tratamiento quirurgico de las lesiones cancerosas de la laringe teniendo en cuenta su localizacion y su extension. Tambien hace un estudio de las diferentes tecnicas a emplear de acuerdo con la situacion de la lesion y de los resultados por el obtenidos en su experiencia.

RÉSUMÉ

L'auteur décrit le traitment chirurgical du carcinome du larynx. Il donne la technique à suivee dans les fissures du larynx et dans la laryngectomie. Le traitment post-operatoire aussi est considéré.

Выводы

Поводы к хирургическому лечению разных типов карциномы гортани описываются автором. Автор также описывает технику ларингофиссуры и ларингектомии и его результаты.

Rectal Conditions Associated with Third Degree Tears

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SO LITTLE consideration has been given to the effect of pelvic floor injuries on support and function of the rectum and the integrity of the sphincter ani, that it seems not unwise to review the picture of their interrelations. Such a review would hardly be worth while, unless we can cast off the old conception of prolapse and look upon the protrusions through both clefts of the pelvic floor as herniations, and to recognize that when the pelvic floor is injured in one triangle, there is almost invariably some lack of support in the other. Rectal sagging and herniation accompanying and resulting from gross and microscopic trauma of the pelvic floor have not received proper consideration.

Marked damage to rectal support may occur with first and second degree tears. Stretching at childbirth may even take place, so that much damage occurs to the supported and supporting structure without a tear of the first, second or third degree. A second degree tear may start a series of disabilities that may render the supports and the sphincter almost useless, and may be a large factor in the development of hemorrhoids, herniation of hemorrhoids and the rectum, and rectocele, which is a rectal herniation through the anterior cleft of the pelvic floor.

If we can keep in mind the developments from these lesser degree tears, we will be better prepared to understand all phases of the third degree tears, their extent, complications and repairs.

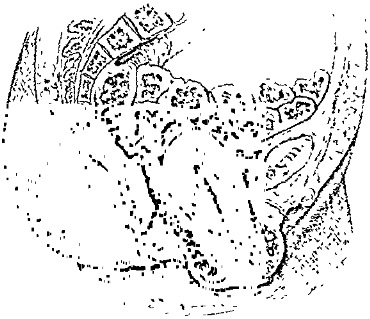

Fig. 1. Illustration showing pelvic structures coming far below the normal pelvic floor, which should run hammock-like from the symphysis to the coccyx. In this case the bladder, uterus, rectum and anterior and posterior cul-de-sac show very marked herniation.

A third degree tear may not have more or less evil influences from the standpoint of support than other pelvic floor injuries, but they add distressing features which are lacking in lesser degree tears. Their evil influence is greatly augmented by the occurrence which distinguishes them as third degree tears, namely, a tear through the sphincter ani muscle and, perhaps, up the rectum. This may be accompanied with much or little injury to the levator ani muscles, as the tear backward to the rectum may be mostly below the pelvic floor. It may separate the pelvic floor muscles in the median line or add [illegible] rs [illegible] tending into the musculature of the pelvic floor, fairly well forward or well backward, separating the levators from the rectum on one or both sides. The tear, instead of merely going to the bowel wall, may extend up the bowel wall one or more inches, leaving the recto-vaginal septum incomplete. This incompleteness may consist of a "V" shaped tear up the vagina, or a round or irregular fistula between the rectum and vagina, or both may be present, i.e., near or distant from the apex of the tear lies a fistula from a small probe size to that of half a dollar, which would be rather large, to that of a silver dollar, which would be unusual.

This now introduces new draw-backs, t encountered in the lesser degree ars.

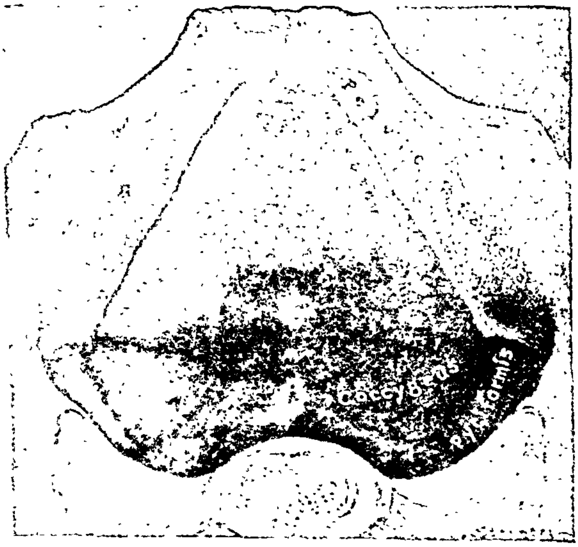

Fig. 2. Illustrating a normal pelvic floor for support with the structures intact. The rectum, vagina and urethra are passing through the pelvic floor and in some cases of loose structure may furnish opportunity for herniation.

1. Loss of sphincter control is the outstanding feature.
2. (a) We have immediately more hemorrhage.
   (b) Fecal contamination of the wound.

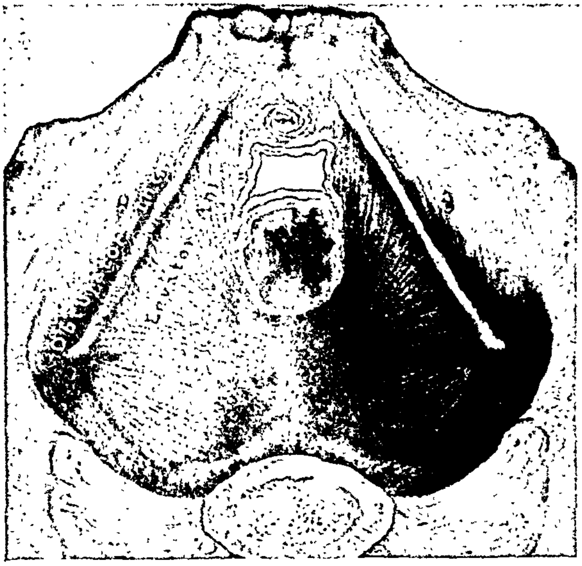

Fig. 3. The pelvic floor as seen from the inside, showing a complete tear back to the rectum with the rectum loosened from the levator ani supports. This shows the possibility of the rectum bulging forward into the vagina and herniating as is shown in Fig. 1.

   (c) Sepsis.
   (d) Seepage after operation.
   (e) Fistulæ.
   (f) Fecal contamination of the vagina.
   (g) Scars running from rectovaginal tears extending to the cervix, holding the cervix down to the perineal region.
   (h) Scars in the rectovaginal outlet, perhaps running up the rectum or into the ano-rectal region.
   (i) These complete tears vary from an almost clean cut tear into the rectum, to very extensive destruction of tissue, which may not be amenable to immediate repair.

There can be no doubt but that the best repair possible should be undertaken at the best possible time. If injuries which are fraught with so many unfavorable circumstances could in any way be prevented, it goes without saying such prevention should receive careful consideration. Skillful guiding of the head through the birth canal has done much, but occasionally fails. Having seen many cases in which episiotomy has been employed to prevent disabling tears, I am far from being convinced that it solves the problem. Complete lacerations are very rare and may even be increased by a median incision. If these rare cases are to be prevented only by such universal use of a side incision of the levator ani muscle episiotomy, then we pay too high a price for this hoped for immunity, for the most damaged levator muscles that I have been called upon to repair, with the greatest deformity, are those that have had a side episiotomy. It is not merely a matter of skill, for the levator muscle, thin as it is, cut transversely across its fibre, does not offer an easy anatomic and functional repair, even in the hands of those who have championed the procedure, and is fraught with a high percentage of failure. A median incision, even when extended to the side of the rectum to avoid sphincter injury, offers opportunity for a more successful repair.

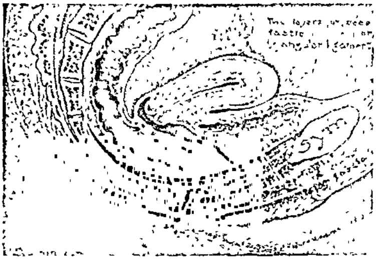

Fig. 4. Illustration showing the muscles and fascia in their proper relation to the bony pelvis with the visceral openings, the rectum, vagina and urethra through the pelvic floor, and the proper relations of the vagina, rectum, bladder and uterus lying above the pelvic floor.

We come then to the repair of those tears under consideration. We do not contemplate the repair of a complete tear with the doubt expressed by some in cases which have had clean obstetrics. On the other hand, we must confess to having been called to repair some cases in which the open treatment seemed to have the advantage of greater safety. A case of obstetrics conducted by a man who followed a great master, and held his silkworm gut sutures in his teeth, and who dipped his forceps in a bowl of unboiled warm water so that the patient would not "catch a cold" by their contact, has not properly prepared a patient for a safe pelvic floor repair. On the other hand, we have been called 300 miles to repair the pelvic floor of a doctor's wife, who had been attended by two of the doctor's brothers and his father. They had followed the "let alone" policy so strictly that when I arrived, one week after confinement, the patient had a normal temperature and none of them knew whether or not she had a complete tear—she did, and it

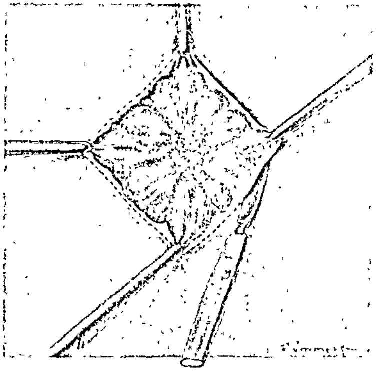

Fig. 5. Illustration showing a beginning herniation of the rectum and hemorrhoids because of dilated sphincter and pelvic floor opening. The bowel is severed from the skin along the dotted line, leaving the sphincter on the skin side and drawing the rectum down until one is past the herniating area

healed by first intention. Immediate repair was done.

The muscles having attachment in the central tendon have largely lost attachment. There are two of them especially that must be considered—the levators and the sphincter ani. As they have pulled apart they have retracted under cover of the skin and the vagina and rectum and other muscles, fascias and fat. The vagina and rectum have fallen together so that there is not good exposure to find and bring together the essential structures for repair. Quite possibly the anterior rectal wall is torn and must be made complete. This is usually done by a line of rectal sutures, and is the method that gives these repairs their uncertainty, or the anterior rectal wall may be mobilized and brought down to make the anterior wall complete, making sutures in the rectum unnecessary. This ethod makes the repair of the complete r almost as easy and nearly as certain he repair of the incomplete tear.

he levators with the fascias must e uncovered and brought together in the median line. This bringing together of the levator ani should be carried far enough forward for pelvic support and give the proper lift to the bladder, but it should be carried backward far enough to get the levator ani at the antero-lateral quadrant of the rectum, take a bite of the rectum and then grasp the levator of the other side in the same relation to the rectum on that side. In this way we insure the pelvic floor support of the rectum, but what is of paramount importance, we enlist the levator muscles, the sphincter recti, in the important function of assisting the sphincter ani, which may have been partially crippled.

The sphincter must now be uncovered and brought around the mobilized and completed rectal wall and attached to the rectum and pelvic floor structures

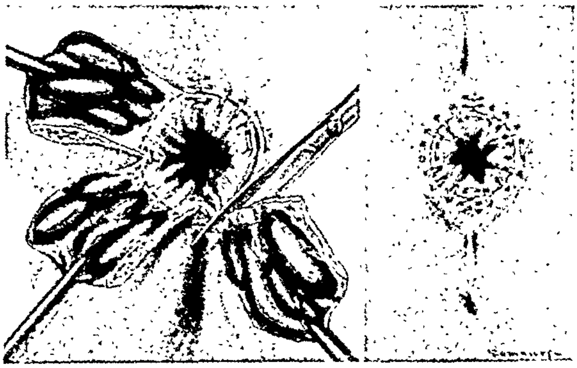

Fig. 6. *Left,* shows a moderate portion of bowel being amputated and the bowel sewed to the skin after the anterior and posterior reduction in size of the sphincter and levator ani muscle openings. *Right,* shows the closure completed with the bulging sphincter just at the outside of the closed incision. In extensive cases the narrowing of the outlet is much more extensive and more bowel is amputated.

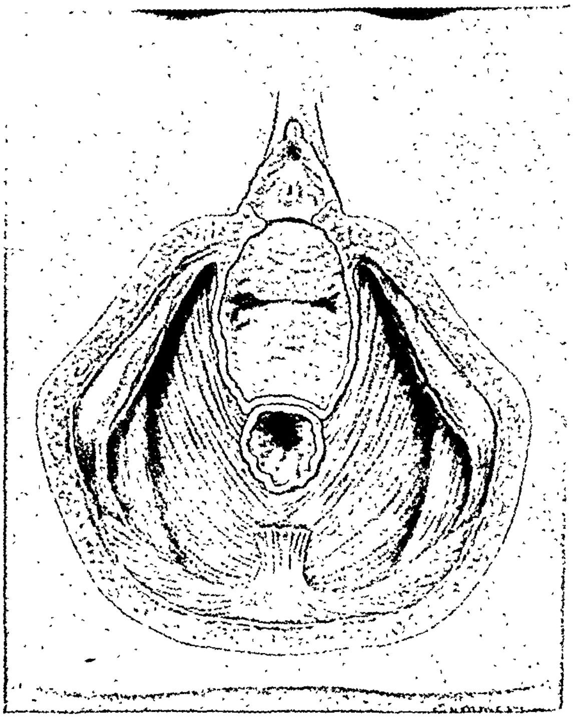

Fig. 7. Illustration showing the pelvic floor with all soft parts cut away and a complete tear with the muscles injured, so that the rectum is displaced backward toward the coccyx and the vagina follows, with extensive dilation and cystocele and rectocele falling into the opening. A repair here will necessitate separating the vaginal and rectal flap, bringing the right and left pelvic floor muscles together between the rectum and vagina. The posterior suture should grasp the left muscle well around to the side of the rectum, then a bite of the rectum five-eighths of an inch above the sphincter, and the right levator muscle well around on the side so that the repaired muscle will snugly hug the rectum giving it its necessary support.

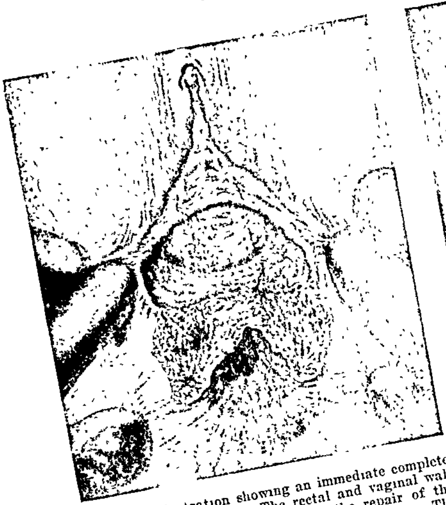

Fig. 8. Illustration showing an immediate complete tear of the pelvic floor. The rectal and vaginal wall have fallen too close together for the repair of the levator ani muscles without raising the flap The rectum must be mobilized so that a purse-string suture can bring it down to the outlet. These preparations for repair are shown in Fig. 9

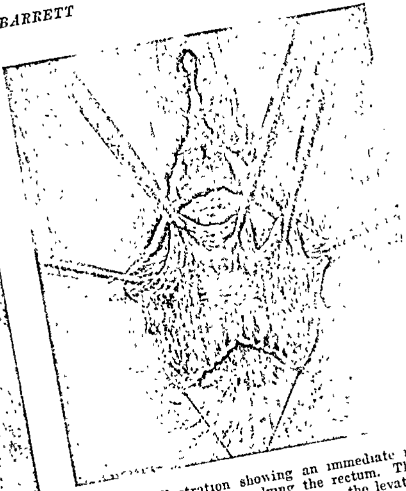

Fig. 9. Illustration showing an immediate repair of the complete tear involving the rectum. The anterior flap has been raised to uncover the levator ani muscles and give room to pick them up and bring them together The rectum has been mobilized so that it can be brought down, making the anterior rectal wall complete. The ends of the sphincter are seen ready to be picked up and brought together high on the rectal wall so that the rectum or sphincter may not retract.

about five-eights of an inch above the lower bowel edge.

It was the custom at one time to put in skin sutures with a long sweeping needle, entering near the thigh on one side and coming out near the thigh on the other, the after treatment being to tie the patient's legs together so that undue stress would not be made on the sutures. The same needle suture combination still survives in many hospitals as a suitable skin and perineal working unit. Less than twenty-four hours ago, I had such a three and one-half inch curved sabre handed me as a suitable carrier of a silk-worm gut suture. Gradually, however, it came to be thought a better closure of the wound to put in a line of sutures to close the vagina, a line of sutures to close the rectal wall, and then the big sweeping needle to close the perineal skin and perineal body. Gradually, it was discovered that the essential structure had retreated to a more distant jungle of tissue than this complication of sutures penetrated, and all that was obtained was a skin mucous membrane pelvic floor. Sooner or later, it was thought desirable to put in some buried catgut or, at one time, kangaroo tail tendon, before closing the skin, rectal and vaginal wound openings. Every move toward progress in pelvic floor surgery has tarried long on the doorstep of superficiality before registering for effectual service.

I will now repeat what those who have attended my clinics may recall having heard; that the surface tear that the oncoming head makes is not usually a good opening through which to repair injured structures. The in [illegible] to th muscle may be at a distance from the skin or vaginal tear, or the muscles may retract from the apparent tear, and escape suturing. When we have raised the skin and vaginal flaps sufficiently to expose the injured muscles for picking up under sight, it is time to begin the placing of sutures. We have been told by good students of the Chamberlain system that at this stage the muscles, after labor and delivery, were "just a mass or disorganized jelly and impossible to identify," but while this was years ago I was able to tell him that after my artist had seen me puddling in that jelly, he was able to produce the pictures of organized structures which were then on exhibition, and that they were faithful representations. The "jelly" was merely the blood that one must encounter in a little greater quantity in a recent tear. Muscles do not "jell" by mere exposure or labor. If, however, an effort at repair does not expose and bring tother the levator ani muscles, this part obstetrics may as well be left to the idwife or the doctor who has had so many thousand cases and "never had a tear." Exposure and suturing of the levatores in the median line is an easy, sure and superficial operation, as compared with suturing a levator muscle that has had a deep oblique cut. For picking up these retracted structures, a strong curved needle that would fit the edge of half a dollar is desirable. The vaginal tear may be repaired with No. 2, 10 or 20-day catgut. The skin and superficial muscles may be brought together with silkwormgut or catgut. Preliminary preparation of the obstetric case should contemplate the necessity of this and many other obstetric maneuvers by good cleansing of the vagina and such repairs and handling of vagina should be followed by cleansing vaginal douches.

We come now to a consideration of complete tears that have gone past the stage for immediate repair. Some have favored a time of ten days or two weeks past the time of delivery to avoid increased danger of puerperal infection by reason of an operation.

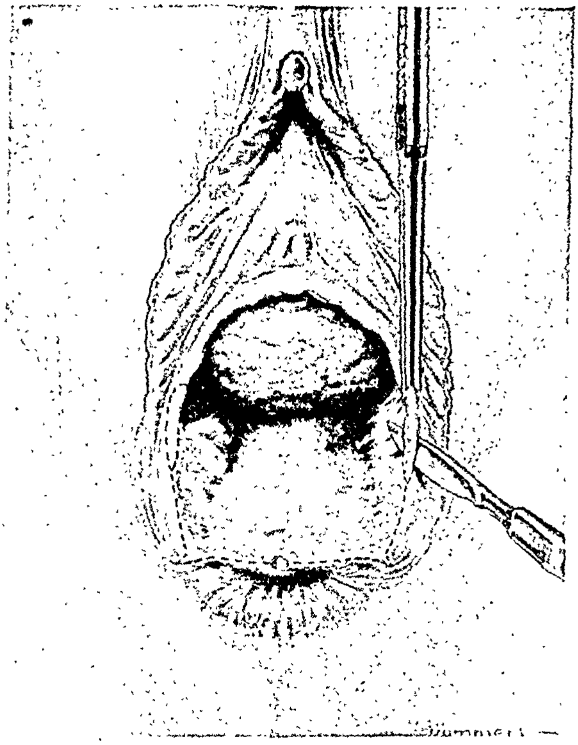

Fig. 10. Illustrating a complete tear involving the sphincter with the sphincter ends retracted to the sides of the rectum. The posterior half of the rectal opening represents the whole circumference of the rectum before the injury took place. The anterior portion of the rectum is represented by a line of scar tissue. The vagina and vaginal scar will be separated from the skin and perineum along the dotted line going back posteriorly to reach the sphincter ends. A cystocele is shown in front and a rectocele posteriorly. The vaginal flap will be raised as far forward as the dotted line and deep enough between the rectum and vagina to uncover the levator and muscles as shown in Fig. 12. Fig. 11 represents the same condition, except the incompleteness of the rectovaginal septum.

Nevertheless, numerous delayed and even neglected cases are seen, some of which have gone through succeeding childbirths. Some have been annoyed by constant lack of bowel control, some have almost constant vaginal contamination. There are cases in which scar tissue has so narrowed and fixed the anal outlet that solid feces pass with difficulty, and liquid feces are not retained—cases in which the anal opening has lost its ability for contraction or expansion. There are cases in which a sphincter going around the posterior part of the bowel opening is so attached to scar tissue that the sphincter action is fairly well maintained, except in times of stress. Scars in the rectovaginal septum and extending down the vagina cause severe dyspareunia, and make defecation painful. Hemorrhoids and herniating rectal mucous membrane is not uncommon, and herniation of the entire rectal wall is seen. A considerable sized rectocele may develop, although many cases are seen without such development. Third degree tear implies a tear of the sphincter ani, but may not be accompanied by extensive pelvic floor tear. Cases are seen in which the anus is hugged nearer than normal to the pubic symphysis and there is very little loss of pelvic floor support. In some cases, instead of the sphincter tear being complete, with the torn ends being definitely retracted to the sides, the muscle fibres thin out as they run forward, leaving very little or nothing to complete the sphincter circle. In such cases the septum is not fixed by scar tissue and the rectal outlet may become quite dilated and flabby and subject to herniation of part or all of the wall of the bowel. The bowel in some cases is complete, but in others may have a "V" shaped defect in the bowel wall or fistula of small or large size, or both, to call for surgical measures to make the wall complete.

Ristine turned down a vaginal flap to lengthen the rectal wall and also furnish an apron to protect the wound from fecal contamination. Some try to save all septum present by trying to close the fistula above any tissue present below, but this is usually not worth while and these cases are the ones with numberless operations failing to close the opening. A complete anterior rectal wall and a much better pelvic floor can be achieved by cutting all tissue up to the fistula and then splitting the septum, starting at the upper fistula edge and bringing the posterior layer down to the outlet for a complete rectal wall. The same method is used in cases of tear up the rectum. It is in these cases in which one might think they needed extension that the Ristine extension would not be applicable.

In the majority of cases the incomplete bowel has been repaired with interrupted catgut sutures placed to tie in the rectum, but this furnishes op-

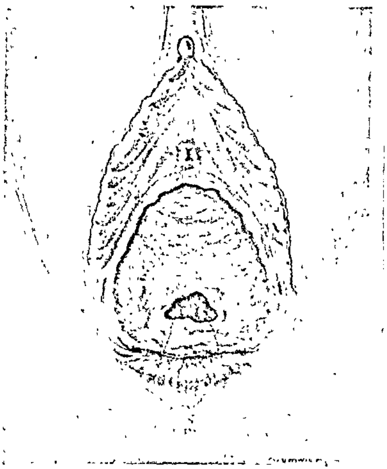

Fig. 11. This shows a complete tear with the levator ani muscle retracted to the sides ending at each side at the dimple shown In addition to the complete tear a moderate sized rectovaginal fistula is seen which, in different sizes, is a common occurrence. The important point in repair is not to try to close the fistula, but to cut away the intervening tissue as shown by the dotted lines, leaving the upper edge of the fistula as the lower end of the rectovaginal septum to be split and brought down, the posterior [illegible] the anterior rectal wall and the anterior [illegible] posterior vaginal wall. The [illegible] will have had a hernio-[illegible] perineal work.

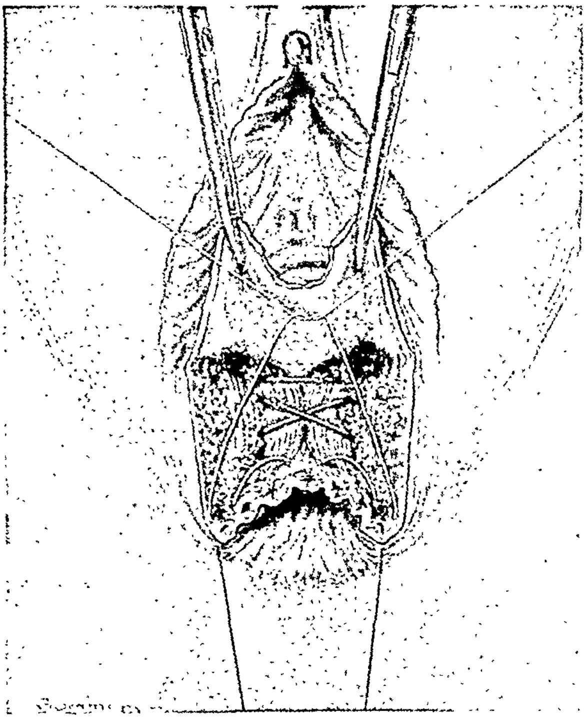

Fig. 12. Illustration showing the anterior flap raised to expose the levator ani muscles which have been sutured as we prefer to suture them. The anterior flap shows the former fistula opening, the posterior flap has been smoothed and purse-stringed. No. 1 catgut suture has picked up the end of the cter and has taken a bite of the rectum and as picked up the sphincter end on the opposite and then is tied ready to draw the two ends of ncter together, as the posterior flap is drawn down nd the skin edges of the two sides drawn together, making the anterior rectal wall complete. Another suture in the levator ani muscles, in addition to the figure-of-eight suture is sometimes necessary.

portunity for seepage and contamination. I have always found the rectal wall capable of being moved down to the outlet, and in so doing the excess of rectal wall in a formed rectocele is disposed of to advantage. Stretching the wall longitudinally narrows the enlarged bowel transversely. In this matter the complete tear has the advantage over the incomplete one.

For years the Tait operation for complete tear was in vogue. This consisted of an "H" shaped incision, the vertical bars of the "H" running along the sides of the vagina to the labia, and backward at the sides of the rectum to pick up the ends of the sphincter, while the horizontal bar of the "H" represented the cut in the lower edge of the septum for the splitting of the septum. The superficiality of the operation is shown by Tait's description, which gives a depth of three-eights of an inch to this flap splitting. Again, like the Ristine operation, it would be applicable for only those cases in which the septum was flush with the perineal skin, or nearly so. But a worse objection confronts us. The flap splitting should continue to a depth that allows the picking up of the levator muscles and their fascias for the key operation of all pelvic floor rebuilding, for support, and the posterior sutures should attach the muscles to the rectum and hug the rectum as an aid to the sphincter, as in the immediate repair. As is readily seen, pelvic floor repair may be quite extensive, requiring the central pelvic floor repair in practically all cases, to which may be added numerous accessory operations as are needed. For this reason, the hernioplasty between the rectum and vagina is called here the key operation.

The removal of a protruding hemorrhoid may be combined with the repair of the anterior cleft and reconstruction of the rectal injury, but it is easily understood that an extensive hernioplasty would not be permissible, with all the additions to the key operation for pelvic floor repair, such as anterior vaginal repair, amputation of cervix, correction of displacement, or as a substitute for the two latter, a hysterectomy. It would scarcely be allowable to divide the work, leaving a herniation of the rectum protruding, so that if too much work presented for a complete operative attack, one would naturally have to choose the hernioplastic operation upon the rectum first, and add such other operations as were found necessary subsequently.

Rectovaginal reconstruction for third

degree tears and their complications does not preclude future childbirth, even through the modified normal route, but there are cases so beset with scars and complications that if a repair accomplished a result to permit pregnancy and the patient going to term, one could well avoid the risk of breaking down this repair work and urge the necessity of a cesarean section. One patient had two children by this method after a successful closure of a rectovaginal fistula with a fourteenth operation, after thirteen unsuccessful ones by many of Chicago's early surgeons.

The purpose of this paper has been to present some of the problems of this complicated condition which causes many a patient to lead a painful, distressing and sometimes a melancholic life, oftentimes in spite of several operations. A preliminary preparation should look toward rendering the bowel and vagina as free from infection as possible. Enemata and douches should be given; the skin and vagina should be thoroughly cleansed by soap and water scrubbing and antiseptic applications.

The problem of third degree tear is not alone one of sphincter control; there is also the problem of pelvic floor support, and pelvic and rectal herniation. There are also extensive lacerations with painful and distorting scars. There are injuries to the bowel, the repair of which calls for ingenuity and skill, and some gift at plastic work. We could all agree, perhaps, that an architect cannot make a plan of a beautiful building, or an artist paint a really fine painting, that their respective minds cannot visualize. In pelvic floor repair, every incision, every trimming, every stitch, every plastic effort, must bear some relation to the finished product.

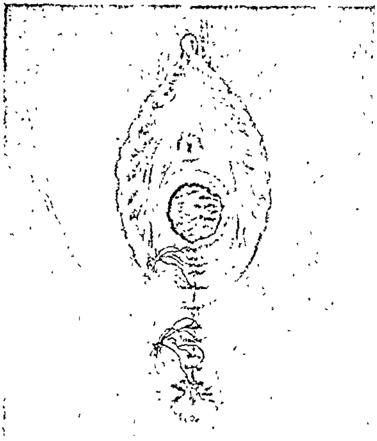

Fig. 13. Illustration showing the incomplete tear fully repaired.

In my intern days I was called upon to assist a man who had had a prominent career, but now he belonged to another age, and his pupils were of pinhole size. After working two hours to make these structures look not like they used to look but like something that would do, he stepped back, turned his head sideways, looked over his glasses, and remarked rather deliberately and wishfully: "Well, what in hell are we going to do next?" I thought he was something of a mind reader, for that was what I had been thinking for the last one and one-half hours. While his thought may have been the thought of others, I learned one of the answers to that question, which was to make plastic work a supporting structure. We must "next" go deeper than the skin or mucous membrane. That is a thing that surgery has been slow to grasp. Some of our clinics, and many of our textbooks still adhere to the superficial work of Emmet and Hegar, with some authors condemning a muscle building pelvic floor. We give due credit to Tait and

Emmet and Hegar for their pioneering, but if we would serve our day as they did theirs, we must deal with muscles as they dealt with skin and mucous membrane. One cannot reconstruct the pelvic floor by outlining butterflies in skin when one has not a clear picture of the anatomy of the butterfly or pelvic floor.

Again, the size of the vaginal or rectal canal coming through the pelvic floor is not determined by the vaginal structure or the rectal structure, but by the strength and stability of musculo-fascial structure around these canals and the attachment of the pelvic floor structure to them. These elastic tubes eventually become the size of the pelvic floor openings and they can herniate and exceed this size if they lose their attachments.

While the pelvic floor furnishes support, properly constructed, it makes an excellent assistant to the sphincter. If the work of the pelvic floor structures [illegible] upon the sphincter, it not only fails to carry the load, but it fails as a sphincter. The repair of third degree tear is then not the superficial procedure that Tait and his followers thought it when they pointed out that with third degree tears cystocele, rectocele and general pelvic protrusion did not occur, for the reason that the forces were not damned by a sphincter. While this is not true, any argument for a superficial repair would be lost by the fact that if the sphincter were reconstructed, the principles would return to those governing injury to the pelvic floor with the sphincter intact.

The operation for third degree tear is deep surgery for pelvic floor repair and a superficial reconstruction of the sphincter to surround the rectum and attach to other muscles in the center of the pelvic floor.

In an incomplete rectal wall we would stress the avoidance of stitches to repair the incompleteness, but rather to move the rectal wall down for an intact anterior rectal wall, which at the same time does away with rectal redundancy in rectocele accompanying complete tear.

Repairs for complete tears do not call for sterilization or prevention of childbearing, but those who have had extensive tissue injury, great scarring, complicated rebuilding and inelastic tissues remaining, should not have the risk of vaginal delivery, but should have cesarean section. Marked rectal herniation that cannot be combined with vaginal repair should usually receive preliminary repair.

I am speaking of very complicated cases. All patients should receive as simple surgery as is consistent with thorough repair. Repair of complete tears should not await the end of childbearing; too much grief is involved therewith.

While it has not been the intent of this paper to deal at length with extensive rectal herniations, for the extreme rectal herniations are not usually combined with complete tears, yet it will be observed that all references to rectal protrusions employ the term herniation rather than prolapse. The former requires a hernioplastic operation on the pelvic floor in addition to amputation of the herniated gut. The term "prolapse" has for generations led to limitation of one's effort to the bowel alone, while in all herniations there is the hernia in the abdominal wall and the herniation of the abdominal structure into or through the hernial opening. Operations upon the herniated bowel should aim to preserve the sphincter. This is accomplished by the intra sphincterian hernioplastic operation upon the pelvic floor.

SUMMARY

The hernial nature of this disability is not lost sight of while dealing with rectal complications which accompany complete tears of the perineum which involve the sphincter ani and, perhaps, the rectal wall. The immediate repair of third degree tears, stressing the point that the birth injury does not make a good opening through which to repair the muscle and rectal injuries, is discussed. The flaps must be raised to expose the injured muscles and the torn rectal wall must be mobilized to be brought down for a complete anterior rectal wall, instead of placing a line of suture in the rectal wall which leaves possibilities for rectal seepage. This makes the immediate repair of complete tear nearly as certain as the incomplete tear.

Rectovaginal fistula, which is common in complete tears, is dealt with by cutting away the isthmus of tissue between the exit and the fistula and start the splitting of the septum at the upper edge of the fistula. The septum must be split high enough to reach the levator ani muscles so that the pelvic floor may be repaired. The levator ani pillars should be made to hug the rectum snugly, in this way giving valuable aid to the sphincter ani, which is quite important if the sphincter ani is weakened. Stress is laid upon the interdependence of the intactness of the genital and alimentary tract. Herniation of piles and of the rectum are considered. A rectocele is really a herniation of the rectum through the anterior or vaginal cleft.

Repair of complete tears is compatible with future deliveries, but if tears have resulted in great loss of tissue or scars, cesarean section may be advisable.

SUMARIO

El trabajo precedente sigue la linea de enseñanza de los trabajos previos de el autor y de las presentaciones clinicas en relacion con "Protrusions Through the Pelvic Floor as Herniations" en lugar de "Prolapse."

La naturaleza herniaria de la incapacidad no es perdida de vista mientras tratamoes con complicaciones rectales que acompañan al desgarro completo del perine con desgarro del esfinter anal y quizas interesando la pared rectal. El trabajo se relaciona con el inmediato reparo del desgarro de tercer grado enfatizando el punto que las lesiones del parto no son una buena herida a traves de la cual reparar las lesiones musculares y del recto.

Los bordes se deben levantar para exponer los musculos lesionados y la pared lesionada; la pared lesionada del recto es movilizada para llevarla hacia abajo para una completa pared anterior rectal en lugar de tener una linea de sutura en la pared rectal que deja posibilidades para la penetracion de residuos rectales. Esto hace el inmediato reparto del desgarro completo casi tan seguro como el desgarro incompleto.

La fistula rectovaginal, la cual es corriente en el desgarro comple to, es tratada cortando el itsmo del tejido entre la salida y la fistula y comienza la separacion del septum en el borde superior de la fistula. El septum debe ser separado lo suficiente alto para alcanzar el musculo elevador del ano de modo que el suelo de l pelvis pueda ser separado y los pilares del elevador del ano se deben areoximar; el recto se encoge y en esta forma da gran ayuda al esfinter anal, lo cual es muy importante si el esfinter esta debilitado.

IMPORTANCIA

Se ha dado enfasis a la que tiene que el canal alimenticio y el canal genital esten intactos. Se estudian las hernias del recto y las hemorroides. Un rectocele es realmente una hernia del recto a expensas de la pared anterior vaginal. La reparacion de desgarros completos son compatibles con futuros partos; pero si el desgarro ha producido gran

perdida de tejido o cicatrices; la cesarea se debe aconsejar.

RÉSUMÉ

L'auteur, dans cette communication, continue l'enseignement qu'rl professe depuis longtemps et qui a de nombreux partisans, de sa methode de traiter les "Protrusions à travers le plancher pelvien comme des Hernies" au lieu de les envisager comme des cas de prolapsus.

Les resultats qu'obtient l'auteur ont été souvent démontrés. Tout en soignant les complications rectales qui accompagnent les ruptures complètes du perinéum de'chirent le sphincter de l'anus et parfois intéressant la paroi rectale, il ne faut pas perdre de vue la natúre herniaire de l'infirmité. Barrett discute la reparation immédiate des dechirures du troisieme degré et démontre que ces déchirures n'offrent pas un bon accès pour la réparation des lésions rectales et musculaires. Les lambeaux doivent être élevés afin d'exposer les déchirures musculaires, et la paroi rectale doit être mobilisée et abaissée afin de reconstruire complètement la paroi rectale anterìeure. De placer des sutures dans la paroì rectale encourt la possibilité de suintement rectal.

Ceci assure une réparation immédiate de la dèchirure complete aussi certaìne que la réparation des ruptures incomplètes.

Les fistules recto-vagínales qu ón rencontre souvent dans les déchirures complètes exigent l'enlèvement de l'isthme de tissu entre l'exit et la fistule et la dédoublement du septum doít être commencé au sommet de la fistule. Il faut dedoubler les lambeaux suffisamment pour exposer le'leveur de l'anus et ainsi reconstituer avec ce muscle des piliers enserrant le rectum et aidant le sphincter de l'anus, ce qui est surtout important quand le sphincter est affaibli. Il importe de ne pas ignorer l'inter-dépendance de l'intégrité des voies alimentaires et génito-urinaires. Dans la même contribution, l'auteur étudie la herniation des hémorrhoides et celle du rectum.

La rectocèle est une herniation du rectum a travers la fente vaginale. La reparation des dechirures complètes est compatible avec les accouchements futurs, mais síl y a en une grande perte de tissu on la formation excessive de tissu cicatricill, la section césarienne doit *être considérée.*

Выводы

Автор уже в предидущих сообщениях указывал, что так называемый "пролапс" на самом деле есть "Проталкивание через тазовой пол в виде грижи."

При осложениях со стороны прямой кишки, которые аккомпанируют разрывы промежности, разрушая сфинктор задняго прохода и даже стенки прямой кишки, также не следует упускать из биду грижевой характер недостатка. Описывая технику исправления родовой раны третьей стенки, автор указывает на то, что родовая рана сама по себе не представляет достаточное отверствие для репарации мускулов и раны прямой кишки. Нужно сделать лоскутки дла того, что-бы выставить на показ поврежденные мускулы, а раненая стена прямой кишки должна быть мобилизированна для шва, что выгоднее чем налагать шов кишки с возможностью просичивания из нее.

Автор лечит ректовагинальный свищ удалением перешейки между выходом и свищем и начинает сепарацию перегородки с верхней части свища. Перегородку нужно разрезать достоточно высоко для того, что-бы достичь мышцы леваторес ани и востановить тазный пол так, что-бы обнять крепко прямую кишку и оказать таким образом поддержку сфинктору задняго прохода. Подчеркивается зависимость цельности родового и алиментарного трактов. Выпад кишки на самом деле представляет собою грыжу прямой кишки через переднюю или вагинальную разщелину. Будущие роды возможны после операций на тотальные разрывы. При большой потере ткани нужно прибегать к кесарскому сечению.

Suture Repair of War Injuries to the Blood Vessels*

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THE introduction of the use of the ligature by Ambroise Paré in the sixteenth century revolutionized the former crude method for the control of hemorrhage. However, in the progress of surgery and of blood vessel surgery in particular, it has been realized that the ligature is not the best solution for the treatment of blood vessel injuries under all circumstances.

In 1888, Matas introduced the practice of suture in his technic for the repair of aneurysm.

During the first World War a number of surgeons of the Central Powers, chief among them von Haberer, stressed the importance of early suture of blood vessels in the treatment of war wounds; before the end of the war he had reported 200 cases of blood vessel injuries treated by this method with only one failure.

In 1913, I described my technic for arteriovenous anastomosis by suture before the session of the International Medical Association at London.

In October 1917, while overseas with the Presbyterian Hospital Unit with the B.E.F. in France, and assigned to a Casualty Clearing Station in the Ypres district, I found that ligature was the accepted method for treating blood vessel injuries. It was recognized, however, that ligature of the popliteal or posterior tibial artery was almost invariably followed by gangrene, but apparently no one in the British service had attempted suture in the treatment of such wounds at the Casualty Clearing station.

During my stay there I used the Carrel suture in five cases of laceration of the popliteal vessels; in all of these cases the continuity of the vessels was restored, pulsation in the tibial vessels followed, and gangrene was averted.

CASE 1.—G. McK., aged 28. Examination revealed a shell wound of the left popliteal space. The hamstring muscles were badly lacerated. The popliteal vessels were exposed and the artery and vein were found lacerated. Bleeding was controlled by flexible clamps, and a longitudinal opening measuring 5 mm. in both vessels was closed with continuous silk suture. A flap of muscle was fastened over the line of suture for protection. After excising all the lacerated muscle, Carrel-Dakin treatment of the wound was employed. Forty-eight hours after operation the foot was found warm, the dorsalis pedis artery was perceptible, and pulsations were normal. Eight days later the wounds were clean, pulse and temperature were normal; the dorsalis pedis and posterior tibial arteries were pul-

TABLE I.

ARTERIAL SUTURE COMPLICATED WITH OTHER INJURIES*

LOCATION	NO. OF CASES	LATERAL METHOD	MORTALITY	RECOVERY
Carotids	9			9
Subclavian	1			1
Axillary	1			1
Brachial	3		1	2
Femoral	4	1		4
Popliteal	4			4
Total	22	1	1	21

*Goodman, C., Surgery of the heart; blood vessels; thrombosis and embolism; and [illegible] transfusion [illegible] ieme [illegible] Société Internationale [illegible] Jul [illegible]

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*Presented at the Seventh National Assembly of the International College of Surgeons, Denver, Colorado, July, 1942.

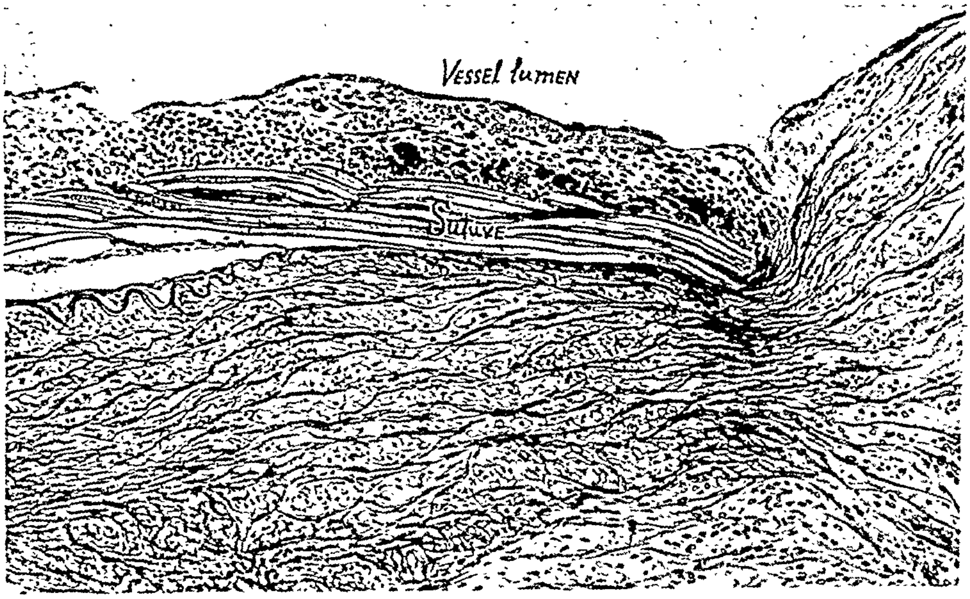

Fig. 1. End-to-end suture of carotid arteries. Specimen removed 20 days after operation. Cicatricial tissue firmly unites one vessel end to that of the other. One extremity is slightly everted and the other is implanted on it. The recess is so obliterated by connective issue that the intimal lining is completely regenerated. The suture line is hardly discernible on account of merging of the cicatrix with the sutured ends. Smooth muscle cells (Van Gieson's stain) grow into the cicatrix.

ting vigorously. On the ninth day the sol- was transferred to the Base Hospital.

CASE 11.—P. T., aged 21. Through-and-through shell wound of left thigh. A large oval opening 1¼ cm. in diameter was found in the popliteal artery just below Hunter's canal, with loss of an oval segment of the wall of the vessel. The artery was sutured and the calibre of the lumen was reduced to one-half its normal size. The tract of shell wound was excised, a branch of the femoral vein was ligated, and all the damaged muscle was excised. A flap of fascia lata was used to cover the line of suture in order to protect it from erosion by the Carrel-Dakin tubes. The circulation of the limb was very satisfactory and the patient was transferred to the Base Hospital. Seventeen days later the patient wrote that he had no pain and was progressing very nicely.

Subsequently, a few French surgeons employed early suture of blood vessel injuries in war wounds. In reviewing the treatment of blood vessel injuries at the Ambulance Chirurgiele under the command of Proust, the French surgeon Maurer stated that he successfully sutured the popliteal artery in two cases.

More recently, von Haberer again advocated suture as the best method of repair of blood vessel injuries. In a lecture delivered in 1940, Learmonth (Edinburgh) stated in his demonstration that suture is the ideal method of repairing wounds of blood vessels and restoring their continuity. He adds: "Hitherto it has had a limited application in military surgery."

On the basis of my experience in the first World War and in civil practice, I want to emphasize the fact that there is no reason why suture of blood vessels should not have a wider application in war surgery. Despite the extensive lac-

TABLE II.

ARTERIAL LIGATION COMPLICATED WITH OTHER INJURIES

LOCATION	NO. OF CASES	GANGRENE	MORTALITY	RECOVERY
Carotids	24		5	19
Subclavian	7		2	5
Axillary	3		2	1
Iliac	4	1		3
Femoral	5	1		4
Popliteal	1			1
Total	44	2	9	33

erations resulting from the missiles of war, repair of the arteries of the extremities can be advantageously undertaken in the advanced operating centers. Most of the wounded arrive at such centers within 24 hours, a time most favorable for repair of the damaged blood vessels. The wounds may be contaminated, but the infection has not yet become invasive. Elaborate instruments are not required for blood vessel suture. The simple equipment can easily be kept in readiness at an advanced operating center. Short, fine, straight, cambric needles (Kirby 16) and fine silk are employed for blood vessel suture; flexible blood vessel clamps are best for handling and closing off the injured vessels, but other devices may be used. The silk employed is sterilized in mineral oil. Threaded needles should be kept on hand ready for immediate use. A needle holder is hardly necessary. I have adopted an epilating forceps which has proved a convenient instrument for guiding the needle when working in a narrow field. The threaded silk sutures are wound loosely about a small square of cardboard to keep them from becoming snarled.

In the treatment of war wounds with injured blood vessels, débridement with removal of all damaged and necrotic tissue is first carried out before the injured vessel is exposed. If the vessel is deeply situated, it may be necessary and proper to ligate one or two of its branches in order to render the vessel more accessible. The vessel is then lifted to the surface on two pieces of tape, which may be used temporarily for closing off the circulation above and below the laceration. If flexible blood vessel clamps are not at hand, rubber bands or smooth forceps without teeth, tied with a ligature, may likewise be used. A small rubber bulb or piston syringe is then used to wash away the clot presented at the opening. Saline or Ringer's solution is used for this purpose. The adventitia or outer coat of the vessel is then trimmed away about the edges of the wound with the aid of small forceps and scissors. Adventitia contains considerable thrombokinase or ferment and should, therefore, not be included in the suture, as it may invite thrombosis. The segment between the temporary clamps or tape ligature is then perfused thoroughly with saline or Ringer's solution, followed by a few drops of liquid vaseline or mineral oil. The latter inhibits drying of the exposed vessel. The rent in the vessel is then closed with a simple over-hand suture. The suture having been completed the t

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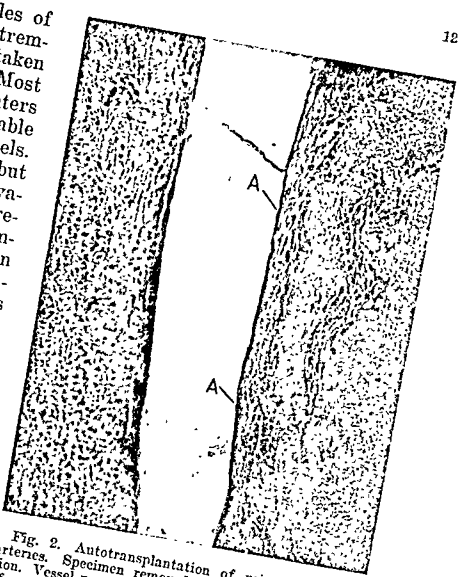

Fig. 2. Autotransplantation of vein into carotid arteries. Specimen removed two weeks after operation. Vessel partially occluded by coagulum. Surface of coagulum presents connective tissue cells, and apparently no accretion has taken place. Blood coagulum is covered by growing fibroblasts also infiltrating coagulum. Blood tends to form no further clot in the coagulum, which presents a smooth surface, as shown above.

moved, and gentle pressure is applied with a pledget of gauze dipped in mineral oil. Slight oozing will prevail for a few seconds. Should there be a spurt of blood because of the unevenness of the suture, an additional suture introduced and tied at the point of hemorrhage will effectively control the spurt. Walling off the operating field with pieces of black silk or other material, will not only maintain a field free from contamination, but will render the fine silk sutures discernible and the procedure easy.

TABLE III.

COMPARATIVE RESULTS OF SUTURE AND LIGATURE

SUTURE	NO. OF CASES	RE-COVERY	GAN-GRENE	MOR-TALITY
Aneurysms	236	226	7	3
Transplantation	12	11		
Other Injuries	20	19		1
Total	268	256*	7	4
LIGATURE				
Aneurysms	337	296**	30	11
Other Injuries	44	33	2	9
Total	381	329	32	20

* Complications: 1 secondary hemorrhage; 1 edema.

** Complications: 1 motor paralysis; 1 spastic paralysis; 1 hemiplegia; 1 disorder cervical plexus: 1 edema; 1 paralytic symptoms.

Where a larger artery has been completely severed, the ends are usually found curled up and retracted. After the wound is débrided and the ends of the severed artery exposed, the adventitia over the ends of the vessel is readily removed by pulling the adventitia over the end and snipping it off with one stroke of the scissors, leaving the media and intima exposed for the suture. The introduction of three guide sutures uniting the two severed ends will usually be followed by relaxation, and will overcome the tendency to retraction of the severed segments. The circular suture may then be completed without any appreciable difficulty.

The technic for the circular suture is identical with the Connel end-to-end intestinal anastomosis. The only difference is, instead of inverting the edges to favor a peritoneal adhesion, in the vascular suture, the edges should be slightly everted to take advantage of the adhesive properties of the endothelium.

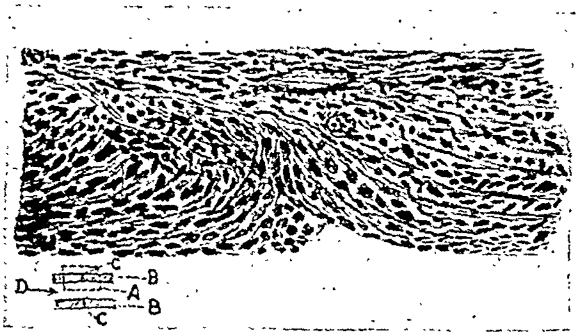

Fig. 3. End-to-end suture of carotid arteries. Specimen removed 9 days after operation. Suture ends separated by ½ mm. connective tissue on one side, and by 2 mm. on the other side. This connective tissue at some points is dense; at others loosely constructed. The intima regenerates everywhere. At one point one of the sutures lies within the vessel lumen, completely covered by connective tissue, with an endothelial surface. Where there is wide separation of the vessel ends, there is a considerable mass of relatively loose connective tissue on the surface, covered with intima. In the depths of the suture line at another point, definite osteoid structure exists. Distinct dilatation of the lumen is observed at the site of the suture line.

In the first World War, most wounds of the type requiring blood vessel repair were treated by Dakin's solution but with the modern use of sulfathiazole or sulfonalimide in the wounds, their postoperative care will be greatly simplified, and the danger of infection and sepsis minimized. The advantage of suture over ligature is the restoration of the circulation to the limb, obviating the dangers of gangrene and the tendency to gas gangrene infection. Ligation of the main vessel of an extremity, if not followed by gangrene, results almost invariably in neurovascular disturbances of a more or less serious character. Such late complications are furthermore avoided by suture. A sutured blood vessel does away with the potential danger of aneurysmal formation with its neurovascular complications. Even if the suture is not entirely successful, and thrombosis ultimately occurs, occlusion takes place so slowly that there is ample time for an adequate collateral circulation to develop.

Recently, the use of heparin has been advocated for the prevention of thrombosis in blood vessel surgery. In my opinion, heparin is not of value in the severely wounded requiring blood vessel suture.

Thrombosis is prevented by two factors in the technic which I have described: (1) thorough washing out of all the clots, and (2) removal of the adventitia from the edges of the wound. The condition of a soldier more or less exsanguinated from loss of blood demands transfusion rather than the administration of heparin or any other anticoagulant.

When a portion or segment of an artery has been destroyed or completely carried away by the missile, so that the severed ends cannot be readily approximated, one may resort to the use of a Tuffier tube. This tube is introduced into the severed ends of the artery and the flanged ends secured from slipping out by a simple ligature. These paraffined tubes when removed at the end of several days, may be partially or completely filled with soft coagulum, but ample opportunity for the development of the collateral circulation will have been attained.

Under favorable circumstances, a segment of the saphenous vein can be interposed with the aid of a bipolar circular suture. This offers a satisfactory and permanent restoration of the continuity of the vessel.

What I have emphasized in regard to blood vessel repair in advanced operating stations of the Army, has been applied with equal force to immediate treatment of the injured among the civilian population.

SUMMARY

The fact that approximated endothelial surfaces heal over very rapidly makes the suturing of vessels a safe and desirable routine procedure. The rapidity is such that, in the absence of infection, (a) the suture material within the lumen does not lead to the formation of an occluding thrombus, and (b) the minute thrombi, formed within the chinks of the wall of the imperfectly sutured vessel, are covered over and prevented from growing by accretion.

The suturing of vessels leads to the prompt restoration of bloodflow through a part and helps to prevent dangerous infections which may be induced by the ligation of vessels with the corresponding shutting off of the circulation.

The excellent results in several hundred cases suggest the use of the following routine procedure:

(1) Isolation of the segments above and below the rent with tape, rubber bands, or flexible forceps.

(2) Irrigation of the lumen with sterile saline solution to remove all clots or foreign matter which might serve as foci for infection or thrombus formation.

(3) Removal of the adventitial coat from along the line of suture to facilitate needling and to prevent thrombokinase from reaching through to the intimal surface.

(4) Simple suture through the media and intima.

SUMARIO

El hecho de que las superficies endoteliales cuando se aproximan cicatrizan muy rapidamente hace la sutura de los vasos un proceder seguro y rutinario. La rapidez es tal, que en la ausencia de infeccion: (a) el material de sutura en el lumen no conduce a la formacion de un trombo oclusivo, y (b) el minimo trombo formado dentro de el agu jero de la pared de el vaso suturado incompletamente, esta cubierto e imposibilitado

para crecer por acumulacion. La sutura de los vasos lleva a la pronta restauracion de la circulacion de una parte y posiblemente la prevencion de el peligro de infeccion que, en ocasiones, puede ser producida por la ligadura de vasos con el correspondiente oclusion de la circulacion.

Los excelente resultados en varios cientos de casos justifica la siguiente adopcion como proceder de rutina en todos los casos quirurgicos:

(1) Aislamiento de el segmento superior e inferior al desgarro con e esparadrapo, banda de goma o un forcep flexible.

(2) Irrigacion de el lumen con solucion salina esteril para suprimir todos los coagulos o materias extranas que pueden servir como foco de infeccion o para formar trombo.

(3) Supresion de la capa adventicia a lo largo de la linea de sutura, para faciliar la costura y prevenir la trombouinasa de alcanzar a traves la superficie intima.

(4) Simple sutura a traves de la media e intima.

RÉSUMÉ

Le fait que les surfaces endothéliales guérissent rapidement après rapprochement, nous enseigne que la suture des vaisseaux sanguins est un procédé désirable et bénin. La rapidité est telle, qu'en l'absence d'infection, le matériel de suture à l'intérieur du vaisseau n'entraîne pas la formation d'un thrombus occlusif, et les petits thrombi formés dans les fentes des vaisseaux malsuturés sont vite recouverts and n'augmentent pas par accretion.

La suture des vaisseaux entraîne un prompt rétablissement de la circulation de la region et aide à empêcher l'infection. L'infection est un des dangers de la ligature du vasseau lésé. La ligature peut supprimer la circulation dans la region vascularisee normalement par l'artère liée.

Les brillants résultats obtenus dans plusieurs centaines de cas justifient l'adoption, comme procéde de routine dans toutes les clinques chirurgicales, de la technique suivante.

1. Isolation des segments supérieur et inférieur à la de'chirure au moyen de rubans, de bandelettes elasques ou de forceps flexibles.

2. Irrigation de la lumiere du vaisseau avec de la solution saline afin d'enlever tous les caillots et tous les corps étrangers qui pourraient devenìr ou des foyers d'infection ou abouter à la formation de thrombus.

3. Enlèvement de l'adventice autour de la ligne de suture (pour faciliter l'introduction des sutures et pour empêcher la thrombo-kinase de pénétrer la couche intimale.

4. Une suture simple intéressant les couches médiale et intime.

Выводы

Тот факт, что сближенныя ендотелиальныя поверхности заживают очень быстро, делает сшивку соссудов совершенно безопассной операцией. В отсуствии инфекции шовный материал в просвете не ведет к образованию тромбов.

Сшивка сосудов востановляет ток крови и способствует таким образом к предохранению инфекции, что может случиться после перевязки сосудов и потери кровообращения в данной части.

Автор получил превосходные результаты в сотиях случаев при наблюдении следующей процедуры:

1. Изолирование сегментов сверх и ниже перерыва посредством тесемьки (тейп) или мягких щипцов.

2. Промывание сосудочного просвета физиологическим раствором для очистки его от сгустков.

3. Удаление адвентиции в области шва (для более легкого укола иголкой и предохранения проникания тромбокиназа в интиму)

4 Обыкновенный шов медии и интима

Hemorrhagic Problems in Child Surgery*

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"SURGERY has been made safe for the patient; we must now make the patient safe for surgery."

PRE-OPERATIVE PREVENTION OF SURGICAL BLEEDING

Lord Moynihan's dictum is especially applicable to the prevention of surgical hemorrhage. Extravascular loss of blood is a challenge that must be met promptly. It is, therefore, incumbent upon the surgeon to assess the operability of a child from the standpoint of postoperative hemorrhage in the presence of imaginary, latent or active hemorrhagic tendency. Each of these three types presents difficulty to the surgeon: (1) The child needlessly considered a "bleeder" invariably has some disturbance in the blood clotting or vascular mechanism; (2) the child with some latent hemorrhagic tendency will be readily recognized from the medical history, despite negative routine pre-operative tests, and (3) the child with active hemorrhagic disease is the universally poor risk.

Every child about to undergo a major or minor operation, whether he is regarded as a good or poor risk is, therefore, entitled to an evaluation of the functional status of all of the tissues of his body. This especially concerns blood clotting functions, because infants and children cannot withstand much trauma. A loss of 30 cc. of blood in an infant is equivalent to a loss of 500 cc. or mor in an adult, and the consequences ar more deep-seated.

Bleeding differs in mechanism an management, although the significanc of hemorrhage is determined by the rat of bleeding, percentage of total bloo volume involved, individual ability t replace blood constituents and interference with normal functions of the body A large hemorrhage may be serious because of the child's inability to adjus himself to the sudden change, whil small repeated hemorrhages may becom grave because of their cumulative effec and failure of the body to recover fror one episode before another occurs. Fortunately, nature has endowed the child with a tremendous reserve of hemopoietic tissue which provides adequately for such emergencies. Unlike other organs, this reserve is not in the nature of ready formed differentiated cells available for immediate function. They actually consist of an abundance of quiescent mesenchymal elements in the form of reticular cells and hematogenic endothelium of the collapsed capillary bed in bone marrow. With sudden excessive demands for red cells there is sharp increase in normoblastic maturation necessitating replacement from erythroblastic and megaloblastic levels and consequent increase in blood-forming areas. But this development of new erythropoietic foci is paralleled by simultaneous increase in clotting components of hemopoietic tissues to be liberated into the circulation in the cause of arresting hemorrhage. The compensatory mechanism is effective in the child with normal clotting mechanism, but ineffective in one with hemorrhagic disease. Clotting components will be liberated at the site of hemorrhage but they are powerless to induce clotting. That is why intravenous blood transfusion often constitutes a life-saving measure in providing the child's circulation with normal clotting substances. When the surgeon cannot possibly ligate all bleeding points he must of necessity depend upon the blood clotting mechanism of the body.

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*Presented at the Third International Assembly of the International College of Surgeons in Mexico City, August, 1941.

PRE-OPERATIVE DIAGNOSIS OF HEMORRHAGIC DISORDERS

Knowledge of the child's hemorrhagic status pre-operatively is equivalent to half the therapy necessary to prevent post-operative bleeding. To delay this until after operation is to encourage needless hemorrhage. Clinical indicaons will point to the need for determining the level of one or more of the clotting components of the blood. Ordinarily, the level of the prothrombin, platelets or thromboplastin will reveal the presence of an essential hemorrhagic disease. If these components are normal then the suspected hemorrhagic disease is of vascular origin and the tourniquet test is confirmative. From the surgical standpoint, there is no need to evaluate the fibrinogen content or calcium ion concentration of plasma, because neither is ever responsible for manifest surgical bleeding. Fibrinogen deficiency, even to the extent of 0.02 per cent in liver disorders, never causes bleeding. Congenital absence of fibrinogen in the blood is a medical curiosity, and acquired fibrinogenopenia due to metastatic or tuberculous destruction of bone marrow, never occurs in children. Calcium deficiency, to the extent of 1 mgm. per cent in serum, will induce tetany but no hemorrhage. We may, therefore, dispense with needless diagnostic determinations pre-operatively.

A. DIAGNOSIS OF PROTHROMBIN DEFICIENCY.

Prothrombin is present in the circulation to the extent of five times the normal requirements, yet deficiency may lead to fatal hemorrhage. Maintenance of the normal prothrombin level depends on the availability of vitamin K for its synthesis by the liver. The daily diet *must provide 1 mgm. of vitamin K per* day, for digestion of fat must be efficient to yield the antihemorrhagic factor. Digestive juices must contain an adequate supply of bile to permit absorption of the vitamin; the liver must be physiologically active to synthetise prothrombin from vitamin K. Absence or inadequacy of any of these requirements leads to prothrombin deficiency. Clinical methods are now available for measuring the prothrombin level of the blood. If the values are at about 25 per cent, bleeding does not occur, although loss of blood, surgical trauma and effects of anesthesia may reduce this supply of prothrombin to lower levels. It is essential in prothrombin determinations to consider 50 per cent levels critical for surgical procedures, although 25 per cent levels suffice for normal activity.

Nutritional Hypoprothrombinemia.—Hypoprothrombinemia of the newborn is a self-limited syndrome occurring in both sexes of all races within the first week of life. It is characterized by spontaneous hemorrhage, concealed or apparent, external or internal, in any tissue of the body, excluding that associated with birth trauma, neonatal accidents or other disease. Intestinal or umbilicial bleeding develops suddenly on the second or third day of life but rarely after the first week of life. Prolonged clotting time from the first moments after birth is simultaneous with only a slight increase in the bleeding time. The marked diminution in blood prothrombin is proportional to the prolonged clotting time.

Hypoprothrombinemia of childhood is a rare form of deficiency disease resulting from starvation, fat deprivation, inadequate absorption of excessive elimination of fat in soluble vitamin K. It is characterized by epistaxis, easy bruising or manifest hemorrhage, especially after surgical intervention. There is a moderate prolongation of clotting time, decreased prothrombin level and increased antithrombin level. Bleeding is precipitated only when sudden demands on the liver depress the prothrombin level below the critical level for hemorrhage, which is only 20 per cent of the normal.

Alimentary hypoprothrombinemia may develop from a variety of gastrointestinal disorders involving excessive loss of vitamin K by vomiting, diarrhea or by inadequate absorption from the intestinal tract. Bleeding may occur suddenly when depleted liver reserves bring the prothrombin to critical levels in digestive disorders, urinary disorders, jaundice or evidence of hepatic disease, i.e., intestinal obstruction, post-operative gastric retention, gastro-jejuno-colic, fistula, regional ileitis, chronic pancreatitis, intestinal polyposis, intestinal fistulas, celiac syndrome, sprue, ulcerative colitis and dysentery.

Cholemic hypoprothrombinemia is a complication of obstructive jaundice resulting from abnormalities of the biliary tract. The liver and spleen become enlarged as jaundice becomes intense after birth. Purpuric spots appear on the skin and hemorrhages occur from the nose, mouth, lungs, stomach, intestines and umbilicus. The blood prothrombin is greatly diminished, the clotting time prolonged, the clot non-retractible, the icteric index high, the direct van den Bergh positive, the stools clay colored, and the urine charged with bile pigment.

Hepatic hypoprothrombinemia is the consequence of severe parenchymatous liver injury in icterus gravis neonatorum, congenital anemia, fetal hydrops, erythroblastosis fetalis, chemical poisoning, acute yellow atrophy, cirrhosis of the liver and tumors of the liver. The extent of prothrombin deficiency becomes an inverse measure of residual hepatic function. Bleeding persists even with adequate vitamin K provision by virtue of its limited utilization within the liver.

B. DIAGNOSIS OF PLATELET DEFICIENCY.

Blood platelets are normally present to the extent of five times the child's requirements, yet fatal hemorrhage may be a result of their deficiency. The rate of production of platelets from megakaryocytes in bone marrow keeps pace with their rate of destruction in the spleen and reticuloendothelial system to the extent that the entire number in the circulation is replaced every four days. Platelets are liberated at the rate of 100,000 per cu.mm. of blood per day and up to ten times as fast after a splenectomy. Diminution in blood platelets may, therefore, be due to decreased production or increased destruction, although a combination of both factors is usually in operation. A platelet diminution increases the bleeding time, clot retraction and capillary fragility. The fewer the platelets in the blood, the longer the capillary lumina remain open, hence the bleeding time is prolonged. Since there are enough platelets to cause rapid clotting, the coagulation time is normal but the clot formed is hydrophilic and retracts poorly. Levels below 50,000 are critical for severe hemorrhage.

Essential thrombocytopenic purpura is characterized by spor[illegible]ous [illegible]orrhages from the skin [illegible] brane and occasionally into internal organs. There is marked diminution in blood platelets, increased bleeding time, decreased capillary resistance, normal clotting time and non-retractile clot. The disease is often congenital or hereditary, rare in infancy but common throughout childhood. There is always some difficulty in deciding whether the first attack is really the essential form of the disease, the thrombocytolic, due to platelet destruction, or to symptomatic form, in which the thrombocytopenia is due to diminished platelet production.

Septic thrombocytopenic purpura is the fatal form of the disease characterized by a sudden onset of digestive disturbances, chills, fever, rapid pulse, cyanosis, collapse, shock and hemorrhage into the skin and adrenal glands. While any severe infection, such as malignant diphtheria, typhoid fever, hemorrhagic variola, or cavernous tuberculosis, may produce thrombocytopenic hemorrhage, the Waterhouse-Friedrickson syndrome is the more prevalent. It is precipitated by bacteria striking healthy infants and progressing rapidly to fatal termination.

Symptomatic thrombocytopenic purpura is the consequence of many systemic disorders and often cannot be distinguished from the essential form of purpura. It occurs in the course of aplastic myelophthisic anemias, acute and chronic leukemias, Banti's and Gaucher's syndromes; acute and chronic infections, allergic and chemical disorders, nephritis and neoplasms. There is inhibition of platelet formation and destruction of megakaryocytes in the bone marrow evidenced by reduction in blood platelets and appearance of pathologic forms. In thrombocytopenia associated with splenomegalies, the spleen inhibits platelet formation in the marrow.

C. DIAGNOSIS OF THROMBOPLASTIN DEFICIENCY.—Thromboplastin is available in very limited amounts in the child's circulation. This active form is gradually liberated from platelets as well as from all tissues of the body in which thromboplastin occurs in considerable amounts. It is the rate of liberation of thromboplastin from blood platelets that determines its degree of effectiveness in blood clotting. Too slow a rate may lead to fatal hemorrhage. The immediate source of thromboplastin is available blood platelets, which may be normal in number and deficient in ability to release this substance. The rate of disintegration of blood platelets in 0.5 per cent citrate solution is about 15 per cent after the first hour, 30 per cent after the third hour, and 60 per cent after twenty-four hours. Platelets slower to disintegrate show marked morphologic variability, with changes in size, shape, structure and staining properties. Determination of the platelet lysis values is the index of platelet stability in the hereditary diseases—hemophilia, thrombasthenia and thrombopathy.

Hemophilia is characterized by a tendency to bleed protractedly from slight injuries, marked prolongation of the clotting time of the blood, exclusive occurrence in boys, and invariable transmission of the disease through the mother. Bleeding is articular rather than capillary. The clot formed in the damaged blood vessels is so soft that when it is washed away, hemorrhages start anew. What may appear to be hemophilia in a girl should be considered as thrombopathy or thrombasthenia. Markedly prolonged clotting time of venous blood is significant, but that of capillary blood fallacious because of admixture with tissue juices.

Hereditary thrombasthenia simulates thrombocytopenic purpura. It occurs in girls more often than in boys and is transmitted as a dominant Mendelian trait from either parent. The blood platelets are normal in number but defective in structure. The bleeding time is prolonged and the clot retraction greatly retarded.

Constitutional thrombopathy is a rare composite of hemophilia and purpura. It occurs in both sexes of all races, especially in Nordics. The frequency in girls is so great that it has been called hemophilia of the female. The course is severe in girls but mild in boys. There is marked prolongation of the bleeding ime, increased capillary fragility, and abundant though defective platelets.

D. DIAGNOSIS OF VASCULAR DEFICIENCIES.—The vascular surface is so tremendous that each cubic centimeter of blood in the capillaries has a surface exposure of over 5,000 square centimeters. The unfavorable aspect of this extensive vascular bed is its susceptibility to structural or functional changes which will permit escape of blood. From birth capillary resistance is manifest uniformly throughout the body to the extent of about 500 mm. of mercury, but this gradually diminishes during infancy until the adult level is attained, approximating about 150 mm. of mercury. Hemorrhagic disorders of vascular origin thus increase with age. When blood is shed, decreased capillary permeability and local clot formation arrest hemorrhage; but when there is injury, inflammation, allergy or malnutrition, vascular function becomes impaired and hemorrhage is inevitable. Under these circumstances normal blood is shed, since all clotting components are at satisfactory levels. The only means of demonstrating vascular deficiency is by clinical evaluation of the child's physical and functional status, correlated with some measure of capillary resistance. The tourniquet test is a qualitative index of vascular status, and the positive pressure test a quantitative measure adapted for children. When cutaneous purpuric spots are not present, they may be induced in susceptible children by either of these tests, as proof positive of latent or active vascular purpura.

Hereditary Purpuras.—Hereditary telangiectasis is an heredito-familial affection, transmitted to either sex as a dominant. It is characterized by localized dilatation of the veins, anywhere in the body, especially the nose, tongue and pharynx. The clotting components are always normal and capillaroscopic examination reveals excessive richness o surface capillaries, lengthening and tortuosity of the loops and convolutions of the terminal arches.

Hereditary epistaxis is a familial disorder transmitted as a dominant Mendellian trait to both sexes. The vascular defect in the nose may occasionally be corroborated by a positive tourniquet test or pathologic platelet formation. At times there is a sudden decrease in platelets during bleeding episodes and prompt return to normal.

Hereditary purpura simplex is a familial tendency developing spontaneous ecchymoses over the neck, trunk and extremities. It is predominant in girls, especially at the onset of menstruation, probably related to endocrine dysfunction. The capillary resistance test is positive, but all clotting components are normal.

Nutritional Purpuras.—Scurvy is readily recognized from the dietary deficiency, swelling of the palate, loosening of the teeth, bleeding of the gums, petechiæ over the molar prominences, pains in the legs, muscular hematomata, and loss of red cells in the urine. [illegible] tourniquet test [illegible] clo[illegible] components are [illegible]

Cachectic purpura is characterized by the pathology of nutritional dystrophy associated with avitaminosis A_1, C and P. The clinical features and hemorrhagic phenomena are determined by the nature of the avitaminosis. Deficiency of protein, carbohydrate, fat or minerals produce no hemorrhagic disorders but deficiency of vitamins alters vascular structure. The tourniquet test is positive and the clotting components at borderline levels but within the normal range.

Allergic purpuras are characterized by increased permeability of the capillary endothelium without any alteration of blood clotting constituents. Purpuric manifestations may occur in various forms, according to the anatomic distribution of the lesions. If associated with exudative skin eruptions, it is known as simple purpura; with visceral symptoms, s Henoch's purpura; with joint disturb- ces, as Schönlein's purpura. Whatever e type of vascular purpura, acute or chronic, local or widespread, the offending allergen may be obscured by the purpuric episode, but the child's allergic constitution and urticarial-hemorrhagic rash are pathognomonic.

Infectious Purpuras.—Infectious purpuras are characterized by embolic infiltration or toxic destruction of the vessel wall. The usual manifestations are vascular with positive tourniquet test and normal clotting components. Occasionally, there may be bone marrow injury with transient deficiency of platelets.

Purpura fulminans is a fatal form of purpura characterized by sudden onset, symmetrical purpura and gangrenous appearing lesions. The clotting components are normal, but capillary resistance is markedly diminished.

Majocchi's syndrome is characterized by small hemorrhages arranged in rings, especially on the upper extremities of children suffering from cardiovascular disease. The rash passes through three stages, telangiectatic, purpuric and pigmentary, as a result of toxic damage to blood vessel nerves.

Mechanic Purpuras.—Leukemic hemorrhages are the consequence of vascular infiltration throughout the body, although subsequent bone marrow involvement aggravates bleeding because of platelet deficiency.

Congestive splenomegaly is invariably associated with bleeding from the veins of the esophagus, stomach and intestines, as a result of chronic lesions of the portal vein.

Endotheliosis in subacute bacterial endocarditis is associated with bleeding in the periphery of the body, especially in the fingertips and toes due to microscopic emboli.

Heart disease induces epistaxis, purpuric lesions or congestive hemorrhages, especially in myocardial insufficiency.

Uremia may lead to terminal, cerebral, retinal and intestinal hemorrhages as a result of hypertension, although bleeding parallels the severity of capillary damage from infection rather than from the extent of nitrogenous retention.

TREATMENT OF PROTHROMBIN DEFICIENCIES

Nutritional Hypoprothrombinemia.—Surgical intervention in the newborn infant must heed the physiologic hypoprothrombinemia present during the first weeks of life. While the infant is born with a normal prothrombin level derived from the mother's blood, the value suddenly recedes to dangerously low figures in a day or two because of the lack of storage of vitamin K. This vitamin must be made available to prevent rapid depletion of blood prothrombin. Such a simple precaution lessens the chances of serious bleeding at the time of and after operations. In the case of manifest hemorrhagic diseases of the newborn, operations must be delayed until blood prothrombin is restored to normal levels.

Prophylactic measures administered to mothers before or during labor is preventive of neonatal hemorrhage in the newborn. The synthetic compound 2-methyl-1, 4-naphthoquinone should be given in 2 mg. doses daily for one week prior to delivery. When necessary, this preparation may be prepared for intravenous administration in the same dosage during labor, if previous newborns have suffered from hemorrhagic disease. Treatment of the infant either to prevent hemorrhagic disease during or after contemplated surgery, or to control the bleeding of manifest hemorrhagic disease pre-operatively is simple and effective. The water soluble compound 2-methyl-1, 4-naphthohydroquinone-3-sodium sulfonate is given intramuscularly immediately after birth in a single 3 mg. dose.

In older children with hypoprothrombinemia of dietary origin, oral administration of naturally occurring concentrate of vitamin K will suffice to bring the plasma prothrombin to normal levels. The fat-soluble vitamin must, of course, be offered with bile salts in order to insure completely effective absorption. If oral therapy is not well borne, intramuscular injection of crude concentrates of vitamin K may be used, although synthetic parenteral preparations are preferred. The most desirable preparation is water soluble vitamin K_5 administered orally with the bile salts from 5 to 25 mg. pre-operatively.

Alimentary Hypoprothrombinemia.—Hemorrhage preceding or following surgical procedures of the gastro-intestinal tract may be due to prothrombin deficiency, the common basis for failure of adequate absorption of the fat-soluble vitamin from the intestinal mucosa. It is induced by insufficient nutrient intake, inadequate bile, excessive loss b vomiting, diarrhea or pre-operative pr cedures. Even gastric lavage or inte tinal drainage essential in post-operativ management, tend to deplete vitamin K Whether the alimentary basis for hyp prothrombinemia is single or multipl normal levels may be restored promptl by vitamin K concentrates. Even sma amounts of vitamin K concentrate intr duced through an enteric stoma may b effective. Since deficient absorption i the determining factor in this group o prothrombin deficiency, it is best to resort to pre-operative parenteral therap using water soluble naphthoquinone, a previously indicated.

Cholemic Hypoprothrombinemia.—The first objective in treating the jaundiced child is restoration of biliary flo and protection of the liver parenchym Some cases of jaundice show normal prothrombin clotting time, some prolonge prothrombin clotting time without manifest bleeding and others a prolonged prothrombin time and active bleeding. Th child whose prothrombin time is norma requires prophylactic treatment with vitamin K concentrate and bile salts several days before surgery is initiated The child whose prothrombin time i prolonged requires similar therapy pre-operatively to prevent hemorrhagic episodes after operation. A gram of th vitamin K concentrate and 2 gm. o water soluble bile salts are disperse in warm water and administered slowl by the drip method. The child who show hemorrhagic manifestations pre-operatively requires drastic vitamin K ther apy. Absorption of the fat-soluble vitamin will be possible only after gastri lavage of blood clots. Indeed, bloo transfusion is a valuable preliminar in providing preformed prothrombin combating shock and controlling bleeding. Then vit [illegible] concen [illegible] bile salts are [illegible] ered [illegible] drip method until the prothrombin time becomes normal. But pre-operative normal prothrombin time does not always maintain post-operatively because surgical trauma and hepatic injury deplete available prothrombin reserves. Consequently, vitamin K therapy must be continued after operation and specific methods for improving hepatic function instituted. Repeated intravenous injection of hypertonic dextrose solutions, blood transfusions, calcium gluconate, glycerin solutions, supplemented by high carbohydrate diets improve liver function.

Hepatic Hypoprothrombinemia. — A child with primary liver disease may be unable to synthetize prothrombin from vitamin K judging from the failure of response to vitamin K therapy. The only means of improving blood coagulability is to correct the action of the liver pre-operatively. This may be attained by the ual regime of a carbohydrate diet, avenous hypertonic dextrose and fre- ent blood transfusions, correlated with calcium gluconate and glycerine administration. With improved hepatic function, the intravenous administration of water-soluble vitamin K_5 enables more efficient formation of prothrombin. The compound is injected in doses of 10 to 20 mg. of 0.1 per cent solution daily until the prothrombin clotting time becomes normal. Success of vitamin K therapy in hepatic problems will be attained only if careful attention is given to pre-operative and post-operative regimen for raising the level of functional activity of the liver. In many cases all such attempts fail despite potent preparations and massive doses of vitamin K because of irreparable liver damage. Indeed, such failure with vitamin K therapy pre-operatively often aggravates hepatic insufficiency after surgery.

TREATMENT OF PLATELET DEFICIENCY

The child whose platelets are less than 100,000 per cu.mm. with or without active hemorrhage should not be subjected to surgery without first improving clotting function. Diminution of platelets are invariably associated with prolonged bleeding time, failure of clot retraction, positive tourniquet test, irrespective of purpuric phenomena. These are not always parallel to the degree of thrombocytopenia; hence the difficulty of determining whether surgical intervention will precipitate hemorrhage in children with borderline blood pictures. The first procedure is to determine whether the thrombocytopenia is symptomatic or essential, since both behave alike except for the presence of underlying processes in the symptomatic form of the disease. This must be established because the symptomatic form is amenable to medical measures and the essential to live-saving splenectomy. A reversal of these procedures may promote disaster to the afflicted child.

Multiple transfusions are effective pre-operatively for elevating blood platelets and arresting hemorrhage. Relief is temporary, lasting two or three days, which represents the average life of the platelets introduced. If the transfusions are repeated at three day intervals the platelets are maintained at normal levels, the bleeding time is diminished and clotting retraction re-established.

Protein shock induced by intramuscular injection of horse serum, typhoid vaccine, milk, liver and parathyroid extracts will often raise the platelets effectively to tide an acute case over a crisis in non-allergic children. The direct relationship between protein shock and thrombocytosis has led to the use of this reaction prior to the extirpation of the spleen. If the child shows a favorable platelet response, splenectomy may be beneficial and *vice versa*.

Roentgen irradiation of the splenic area elevates blood platelets and controls bleeding. The dosage is usually 200 r units directly over the spleen every other day until about 1,000 r units have been applied, provided the reduction in lymphocytes is not excessive. Graded dosage is stimulative but excessive irradiation destructive of platelet and other hemopoietic products.

Splenectomy is dangerous in acute cases unless preceded by a transfusion to bring the hemoglobin and red cells to favorable levels. The platelet count is not a determining factor in surgical prognosis. Unfortunately, many of the acute cases represent the type of thrombocytopenic purpura in which there is insufficient production of megakaryocytes by the bone marrow and so the removal of the spleen is contra-indicated. It is in the chronic form of the disease that splenectomy induces clinical cure in 75 per cent of the cases and marked improvement in 90 per cent. Bleeding ceases promptly after the splenic artery and vein are clamped and the platelets rise to ten times their previous level within a week. Since shock, immediate or delayed, may occur following splenectomy, a typed donor should be available, so that an emergency transfusion may be given, after an intravenous drip of 5 per cent dextrose in normal saline.

Clotting diets predominant in proteins, fats, vitamins A, D and T are invaluable for platelet formation by the bone marrow. Such a regime is especially indicated in cases of thrombocytopenic purpura associated with nutritional disturbances. If nutrients essential for the clotting mechanism are not taken in adequate amounts, nor absorbed properly if properly provided, nor utilized if completely absorbed, the rate of platelet synthesis is depressed, especially in [illegible] and other deficiency states. If the high protein and fat diet are reinforced by the fat-soluble vitamins higher platelet levels are insured. Vitamin T is present in egg yolk, viscera and sesame oil.

TREATMENT OF THROMBOPLASTIN DEFICIENCIES

Hemophilia, thrombopathy and thrombostenia are the three hereditary hemorrhagic disorders with chronic insufficiency in thromboplastin formation. Hemophilia is a disease of the male and the other two disorders occur in both boys and girls. Any surgical intervention involves tremendous risk from the standpoint of post-operative bleeding. Nevertheless, minor and occasionally even major operations may be undertaken if the afflicted child is given a large transfusion pre-operatively and another post-operatively from a typed donor kept in readiness at the bedside.

Thromboplastin extracts preserved in vacuo to maintain their potency are effective locally in mild bleeding. Fresh human serum, fresh tissue extract, raw meat juice, fresh cuts of meat, cephalin, powdered thrombin, glycerin extracts of dried brain or lung, kephrin or snake venom, are equally effective. Powdered products are preferable to solutions because they are not washed away so readily by the oozing blood. In applying such preparations it is necessary to remove loose clots in order to permit the active thromboplastin to come into direct contact with the oozing surface. Thromboplastin preparations are the only local measures of any value, for chemical styptics actually interfere with clot formation. Other agents such as placental extract, female sex hormone, oxalic [illegible] and the like are [illegible]

Multiple transfusions preferably by the continuous drip method continues to be the most dependable hemostatic in preparation for operation or emergency treatment of hemorrhagic crisis. The clotting time of hemophilic blood attains normal levels within several hours and remains so for a day, the life of normal thromboplastin. A similar effect is produced when a plasma transfusion is given, hence the result is due to the added thromboplastin. Pooled plasma may be stored for weeks in a refrigerator without change in thromboplastin potency and may be transfused intravenously without regard to blood groups. The degree of improvement depends on the volume of plasma injected, although as little as an ounce of reconstituted plasma suffices to bring the clotting time of hemophilic blood within normal limits. Improvement may be evident within 30 minutes of an intravenous blood or asma transfusion. Transfusions of 100 at 12 hour intervals are preferable those of 400 cc. at two day intervals.

TREATMENT OF VASCULAR DEFICIENCIES

The body has a dual defense against hemorrhage: (1) coagulability of the blood, and (2) vascular response to injury. The latter is involved in many more bleeding disorders than the former; hence the need for evaluating the vascular mechanism as well as the clotting components. Capillary resistance measured by tourniquet, graded suction or positive pressure tests indicate the presence of vascular defects. Capillary tonus decreases in a great variety of vascular hemorrhagic diseases with escape of normal blood as a result of trauma, pressure, avitaminosis, infection, chemical injury or lymphatic infiltration. Establishment of the diagnosis gives the therapeutic clue. Empirical methods are of no avail and lead to needless waste of sick days. Even transfusions are futile in most forms of vascular purpura. Effective therapy can be realized in vascular hemorrhagic disorders if the etiologic agent is discerned and acted upon accordingly.

Hereditary purpuras are not amenable to any dependable form of therapy. Since local defects in the nose and skin are relatively mild, surgical intervention is possible in unaffected organs without inducing hemorrhage. Hemorrhage episodes may be halted by determining the exact source of vascular defect for application of electrocautery, silver nitrate, chromic acid bead or submucous injection of 5 per cent quinine and urethane.

Nutritional purpuras respond promptly to oral parenteral administration of deficient vitamins, i.e., B_1, C and P. The body retains such vitamins almost completely, hence it is possible to administer the total curative requirement pre-operatively in one dose if desired. Vitamins B_1 and C are available in synthetic products and vitamin P may be obtained in the form of crude extracts of lemon rind in 500 mg. doses or in the form of more potent soluble eriodictin, in 10 mg. doses.

Allergic purpuras require a prompt elimination of offending allergens whether they be foods, drugs or bacteria. Endothelial permeability may be temporarily diminished by injecting calcium gluconate intramuscularly or intravenously, subcutaneous injections of ergotamine or by means of autohemotherapy. Surgical intervention will induce no hemorrhages after preliminary blood transfusion. Vitamin P administration in 10 mg. daily doses of eriodictin will raise the capillary resistance to normal levels during operative procedures or after prolonged desensitization of the offending allergens. Infectious purpuras may be alleviated by clearing underlying foci and maintaining satisfactory levels of capillary resistance in the interim by means of vitamin P. Larger doses of the permeability vitamin are necessary to overcome continuous injury from bacterial toxins.

Mechanical purpuras are the most obvious of hemorrhagic phenomena because the associated systemic disorders point to endothelial damage by infiltration, thrombosis, hypertension, congestion, pressure or other forms of mechanical injury. No definite pre-operative measure is indicated other than specific therapy for the underlying disease.

SUMMARY

A loss of 30 cc. of blood in an infant is equivalent to the loss of 500 cc. or more in an adult, and the consequences are more deep-seated. Compensatory mechanism after blood loss is effective in the child with normal clotting mechanism, but ineffectual in one with hemorrhagic disease. Intravenous blood transfusion often constitutes a life-saving measure by providing the child's circulation with normal blood clotting substances.

Abnormal bleeding may be due not only to deficiency in the blood clotting components but also to defectiveness in the vascular endothelium. The tourniquet test is confirmative of vascular origin if blood components are normal. Deficiency of prothrombin may lead to fatal hemorrhage. Maintenance of normal level depends on availability of vitamin K for its synthesis by the liver. A level of 50 per cent is considered critical for surgical procedures although 25 per cent levels suffice for normal activity.

The diagnosis and treatment of vascular and clotting deficiencies are considered at length. Arrest of hemorrhage involves local treatment to control bleeding points and general treatment to promote intravascular clotting. The choice procedure depends upon pre-operative evaluation of the child's hemorrhagic status. The time to treat deficiency states most effectively is when they can be detected by laboratory means rather than be surprised by hemorrhagic symptoms. Prophylactic measures administered to mothers before or during labor is preventive of neonatal hemorrhage in the newborn; this is especially indicated if previous newborns have suffered from hemorrhagic disease. Treatment of the infant also is simple and effective. Multiple transfusions by the continuous drip method is the most dependable hemostatic in preparation for operation or for emergency treatment of hemorrhagic crisis. Transfusions are futile in most forms of vascular purpura. Hereditary purpuras are not amenable to any dependable form of therapy. Nutritional purpuras respond promptly to the administration of deficient vitamins.

RÉSUMÉ

Une perte de 30 c.c. de sang chez un enfant équivant á une perte de 500 c.c. ou plus chez. Un adulte et les conséquencies en sout plus sèrieuses. Chez l'enfant avec un mécanisme coagulant normal, la compensation effective se rétablet mais cela n'a pas lieu chez l'enfant ayant une maladie hémorrhagique. La transfusion sanguine intraveineuse sauve la vie en fournissant à la circulation de l'enfant un sang possedant les substances coagulantes normales. La perte anormale de sang n'est pas seulement due au manque de components sanguins coagulants mais aussi à une carence de l'endothelium vasculaire. L'épreuve du tourniquet nous renseigue sur l'origine vasculaire de l'hémorrhagie. Il les components du sang sont normanx. Le manaque de prothrombine peut entraîner le mort. Le niveau normal de la [illegible] uantit[illegible] vitami[illegible] K pêrmettaut la s[illegible] e [illegible] thr[illegible] bine par le foie [illegible] a

primordiale. Un niveau de 50% est critique pour intervention chirurgicale maís un niveau de 20% suffit pour activité normale.

L'auteur étudie à fond le diagnostic et le traitement des déficiences vasculaires et coagulantes. L'arrêt d'hémorrhagie demande l'arrêt local des points saignants et aussi des mesures générales ayant pour but la coagulation intravasculaire. La traitement de choux est déterminé par l'évaluation pré-operative d'état hémorrhagique de l'enfant. Le laboratoire nous renseigne; il ne faut pas se laisser surfirendre par les symptômes hémorrhagiques. Des mesures prophylactiques administrées à la mère avant et après l'accouchement empêche l'hémorrhagie néonatale chez le nouveau-né; cecá est surt out de rigueur si les enfants précédents out souffert de maladie hémorrhagique. Le traitement chez l'enfant est simple et éfficace. Les transusions sanguines par la méthode de outte à goutte continue offre les meileurs résultats pour la préparation du malade et le traitement d'urgence de crises hémorrhagiques. Les transfusions sont futiles dans la plupart des formes de purpura vasculaire. Les purpuras héréditaires na cèdent pas aux méthodes thérapeutiques. Les purpuras nutritionnels cèdent promptement à l'administration des vitamines qui mangment.

SUMARIO

La perdida de 30 centimetros cubicos de sangre en el infante es equivalente a la perdida de 500 cm cubicos en el adulto y las consequencias son aun de mayor importancia. Los mecanismos compensatorios del nino solo son efectivos en la hemorragia cuando su sangre coagula normalmente. Las transfusiones de sangre frecuentemente salvan la vida del nino cuando le suministran en suficiente cantidad los elementos necesarios para la coagulacion normal de su sangre. Las hemorragias en el nino se pueden deber tambien a ciertas alteraciones patologicas del endotelio vascular. La prueba del torniquete confirma el diagnostico de las hemorragias de origen vascular. La deficiencia de la protrombina puede resultar en hemorragias fatales, por lo tanto, es importante el mantener la concentracion normal de la vitamina K para su sintesis por el higado. Un nivel de 50 por ciento es considerado ya critico en las intervenciones quirurgicas, no obstante el ser un 25 por ciento suficiente en los estados normales.

El estudio del diagnostico y tratamiento de las alteraciones vasculares y de las deficiencias de la coagulacion de la sangre ha sido presentado con amplitud en este trabajo. El arresto de las hemorragias requiere un tratamiento local cuyo objeto es el controlar todos los puntos que sangren y un tratamiento general que ayude la coagulacion intravascular de la sangre. Es, por lo tanto, de gran importancia, el evaluar durante el periodo preoperatorio el estado hemorragico del nino. El tratamiento debe de ser preventivo. Medidas profilacticas deben de instituirse en la madre antes o durante el parto para evitar las hemorragias del recien nacido, muy en especial en todos los casos que presenten una historia de diatesis hemorragica en partos previos. El tratamiento del infante es generalmente simple y efectivo. Las transfuciones sanguineas dadas frecuentemente por el metodo continuo de gota a gota es el metodo de excelencia preoperatorio o durante una crisis hemorragica. Las transfusiones sin embargo son sin valor en las purpuras vasculares. Las purpuras hereditarias en general no responden al tratamiento. Las que se deben a deficiencias de la nutricion responden prontamente a la administracion de las vitaminas que son responsables.

Выводы

Потеря 30-и кубических центиметров крови у ребенка равняетсч потери 500 к. ц. у взрослого, а результаты этой потери даже более серьезны. Компенсаторный механизм у ребенка с нормальным механизмом свертывания крови присутствует и после потери крови, но может отсутствовать при наличии кроветочной болезни. Переливание крови в последних случаях часто спасает ребенка, снабжая его кров веществами способными ее коагулировать.

Ненормальное кровотечение происходит не только от недостатка коагулирующих веществ, а также в присутствии нарушения васкулярного эндотелиума. Недостаток протромбина может служить причиной смертельного кровотечения. Поддержка нормального зеркала протромбина зависит от присытствия витамина К и его синтеза в печени. Зеркало в 50 процентов может оказатьсч опасным при хирургических операциях, хотя при нормальных условиях 25-и процентное зеркало достаточно.

Автор описывает подробно диагноз и лечение васкулярных недостатков и нарушение механизма сворачивания крови. До-оперативная оценка геморагическово статуса ребенка дает возможность избрать правильное лечение кровотечения. Статус этот нужно обличить при помощи лаболаторных процедур и лечить его во время, а не ждать внезапного появления кровотечения. Кровотечение у новорожденного можно продовратить лечением матери перед родами или во время родов. Найлучший метод подготовкч к операции это повторные переливание крови в случаях экстренного лечения геморагического кризиса. В большинстве случаев васкулярной пурпуры переливки крови не помогают. Гередитарныя пурпуры также невозможно лечит никакимбы то нибыло мотодом. Алиментарныя пурпуры быстро излечиваются придатком к диете недостаточных витаминов.

NOTICE is hereby given to all concerned that in accordance with Article XX, Paragraph I, of the Consitution of the International College of Surgeons that the International Board of Trustees had adopted the following amendments to the Con- [illegible]

comply with the Constitution and By-Laws of the Central Organizaion" "9. Chapters shall be composed of members of the various classes hereinafter described. Each member of a National Chapter shall be subject to the jurisdiction of the Central Organization of the International College of Surgeons as well as the jurisdiction of the Chapter to which he belongs." ARTICLE III of said Constitution is hereby amended by adding the words "of the National Chapters" after the word "membership" in the first line of said ARTICLE ARTICLE III, Section I is hereby amended by adding the words "or over," after the word "age", in line two of said Section. ARTICLE III, Section 4 is hereby amended by striking out the italicized words after the word "over" in line two of said Section ARTICLE III is hereby amended by adding a new section thereto to be called "Section 9. Ages of Members," which shall be in words and figures as follows· "The ages indicated for associate members, members and fellows, are set forth for guidance only. Each chapter shall have the right to provide in its constitution or by-laws, for the ages of admission for the various classes of members, depending upon the exigencies and customs of t [illegible]

CLE V, Paragr [illegible]
word "College" [illegible]
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the word "Inter [illegible]
eral Assembly" [illegible]

Assembly" now appear. ARTICLE XII is hereby amended by striking out Paragraph 7 thereof. ARTICLE XVII, Paragraph I is hereby amended by inserting the word "International" be for the words "General Assembly" in the first line thereof. ARTICLE XVII, Paragraphs 3, 4 and 5 are hereby amended by inserting the word "National" before the word "chapters" in the first line of each of said paragraphs ARTICLE XX, Paragraph 2, the following words to be deleted "provided a written notice is given two months in advance to each chapter and to every voting member of the College affiliated with a Chapter." ARTICLE XX, Paragraph 3, is hereby amended by striking out the whole of said paragraph as it now is worded and inserting in lieu thereof, the following words: "3 A written request for an amendment, signed by one hundred members of the College, representing at least five different National Chapters, shall make it mandatory for the House of

(Continued, page 156)

Un Caso de Lipoma de la Cara Toracica del Diafragma*

(Case of Lipoma of the Upper Surface of the Diaphragm)

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SUMMARY

The author reports a case of primary tumor of the diaphragmatic muscle which proved to be a lipoma on pathologic examination, and gives his method of treatment.

ME PERMITO presentar el siguiente caso de lipoma de la superficie superior del diafragma, operado con éxito por toracotomía, por el hecho de que los tumores de dicho septum son sumamente raros; y porque sus síntomas, siendo tan vagos, no han permitido el diagnóstico de la mayor parte de ellos durante la vida. Revisando la bibliografía que existe al respecto, nos encontramos con comunicaciones referentes sólo a 14 tumores primitivos del diafragma: 8 malignos, todos los cuales presentaron tejido sarcomatoso; y 6 benignos, de los que sólo 3 fueron lipomas: casos de Cooner (1897), de Clark (1887) y de Soderlund (1937).

Fueron diagnosticados correctamente, 1 lipoma (Soderlund 1937), un fibroma (Kincella) y uno maligno (Gross 1911); uno durante una intervención por presunto tumor del bazo (Sauerbruch 1913). El resto, o sean 10, lo fueron en la autopsia. Nuestro caso representa pues una pequeña contribución al conocimiento del diagnóstico y tratamiento de estas neoplasias.

R. M. P., de 14 años de edad, escolar, originario de México, D.F., me fué presentado en la consulta en julio de 1939 como presunto tuberculoso pulmonar por tener febrícula, tos y dolor en el hemitorax izquierdo, sin ataque ostensible del estado general.

Refiere el enfermo que hace cuatro años, a raíz de un traumatismo de mediana intensidad que recibió en el hipocondrio y flanco izquierdos, comenzó su mal; pero la investigación clínica demostró que los síntomas se sucedieron en el siguiente orden cronológico: febrícula, dolor y tos, y que el traumatismo tora-

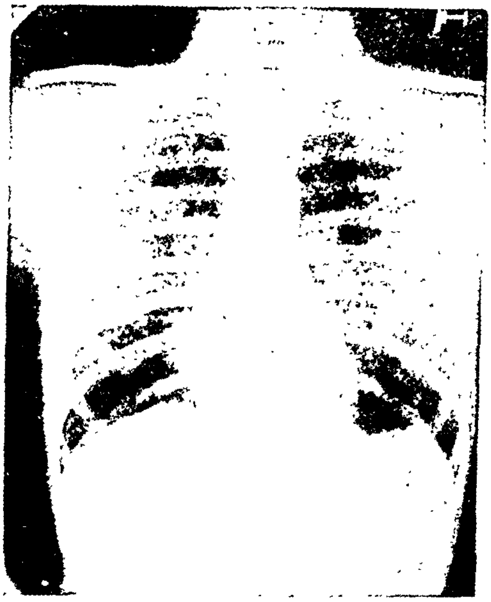

Fig. 1. Nótese en la base del hemitorax izquierdo la sombra ovoidea del tumor, la superposición de las sombras diafragmáticas y tumural y una bula gaseosa del ángulo esplénico, abajo del contorno diafragmatico. No se aprecia ningún signo radiológico de quiste.

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* Presented at the Third International Assembly of the International College of Surgeons in Mexico City, August, 1941

coabdominal fué posterior al principio de dichos síntomas.

La aparición de la fiebre data de muchos años atrás y desde que recuerda el paciente ha tenido los siguientes caracteres: intermitente, irregular tanto en el horario de su aparición, como en la magnitud de sus ascensos y del tiempo que dura, pues a veces ha alcanzado 37°5 o 38°5 grados centígrados y otras no pasa de 37; en ocasiones vespertinas y otras en matinal; nunca ha durado arriba de 3 o 4 días consecutivos. Los intervalos de apirexia han sido en ocasiones de varios meses.

Dicha fiebre ha sido concomitante con una constipación de mediana intensidad de origen cólico y coincidiendo con un síndrome de disuria del cuello vesical y con orinas turbias; siendo facil de establecer la relación de causa a efecto entre aquella y éstos, ya que al vaciarse el intestino, desaparecen fiebre, disuria y turbidéz de la orina. Este hecho, unido a la ausencia de síntomas de actividad tuberculosa pulmonar, digestiva o ganglionar, asi como a la no existencia de ninguna otra molestia referible a infecciones crónicas, nos llevaron a la conclusión de que la fiebre es un fenómeno ajeno y nó atribuible al cuadro torácico que a continuación analizamos.

El primer síntoma torácico fué el dolor, posterior en su aparición a la fiebre y anterior al traumatismo, el que, dicho sea de paso, solamente hizo fijar al enfermo la atención sobre sus síntomas. Los caracteres del dolor, en un principio muy vagos, se precisaron progresivamente hasta adquirir los siguientes: localizado en la base del hemitorax izquierdo, se iradiaba siguiendo el trayecto de los últimos intercostales y del frénico del mismo lado; de carácter lancinante y de intensidad variable, condicionado en su aparición por la mayor profundidad de los movimientos inspiratorios, por lo que se hacía aparente durante la gimnasia respiratoria, la fatiga, etc.; ningún síntoma lo precedía ni lo seguía y sólo cuando era muy intenso provocaba tos; disminuía su intensidad con el reposo para desaparecer tan pronto como la respiración se normalizaba. No tenía relación con las actitudes; no hubo nin-

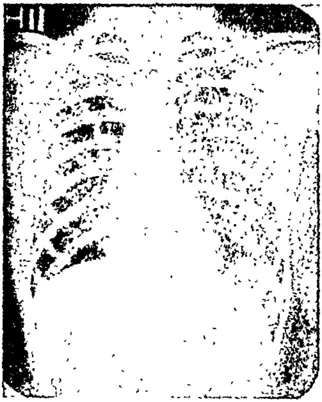

Fig. 2. Aspecto y magnitud de la masa neoplásica, dos meses antes de la que se representa en la Fig. 1.

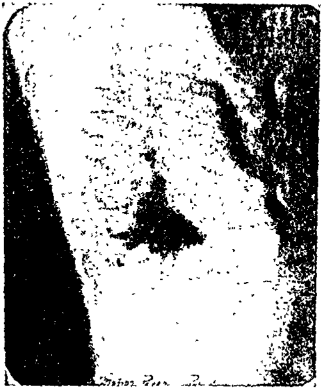

Fig. 3. Imagen del tumor en P.L.D. mostrando su absoluta independencia del corazón.

gún síntoma de padecimiento broncopulmonar ni se encontró relación del dolor con la actividad funcional del estómago y del colon, principalmente del ángulo esplénico y porciones adyacentes de este último.

En cuanto a la tos lo único que puede decirse, es que nunca apareció si no ligada a la mayor intensidad del dolor; que se presentaba por tosiduras aisladas, seca, y nunca emetizante ni de actitud. *Finalmente*, debido a una limitación instintiva de la profundidad de las inspiraciones durante el ejercicio físico, aparecía ligera disnea con polipnea que se quitaba tan pronto como la hematosis correcta quedaba asegurada mediante inspiraciones poco profundas.

Haciendo caso omiso de la fiebre, nunca hubo ningún otro síntoma general. Por todo lo anterior tuvimos la presunción de que los síntomas torácicos estaban determinados por un proceso no inflamatorio de la base del hemitorax izquierdo, posiblemente extrapulmonar por la ausencia de síntomas que acusaran el ataque de dicha víscera.

Dicho proceso de la base del tórax, por el hecho de manifestarse por síntomas irritativos intercostales y frénico, así como por tos de tipo pleural, nos hizo desechar una localización mediastinal baja, máxime que no hubo nada que acusara repercusión sobre los órganos de esta porción del mediastino, excepto el dolor frénico izquierdo, el que, asociado a las molestias de tipo intercostal, precisan aun más el sitio afectado a una porción periférica de la base.

El resto del interrogatorio, investigando las posibles repercusiones del padecimiento supuesto, sobre el resto del organismo, asi como los antecedentes del enfermo, con la mira de precisar alguna etiología, no fueron suficientes para afinar más el diagnóstico, por lo que se procedió a la exploración minuciosa, tanto física como de gabinete, siempre sobre la base de que se trata de un padecimiento, no inflamatorio, no broncopulmonar, ni menos tuberculoso, de la parte baja del hemitorax izquierdo.

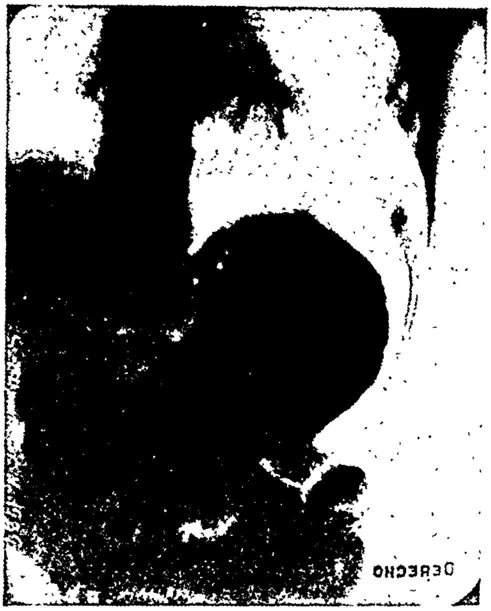

Fig. 4. Estómago lleno con bario y enfermo en Trendelenburg. Nótese el contorno interrumpido del diafragma y la absoluta independencia del estómago y el tumor.

La exploración física de las porciones broncopulmonar y pleural del aparato respiratorio, demostró absoluta normalidad. En la base del hemitorax izquierdo a la altura del noveno espacio intercostal y aproximadamente entre las líneas axilar media y mamaria, se encontró una zona submate, sin límites definidos hacia arriba y hacia atrás, que se continuaba insensiblemente con la sonoridad pulmonar. El límite inferior de la sonoridad pulmonar era neto en el resto del hemitorax. La movilidad diafragmática, investigada por percusión fué normal. No hubo signo del velo de Turban, ni la auscultación reveló datos de ataque pleurítico de la base.

En el mismo lado izquierdo, los puntos de Valleix correspondientes a los últimos intercostales, asi como los puntos frénicos anteriores y del cuello, y los botones diafragmáticos anterior y poste-

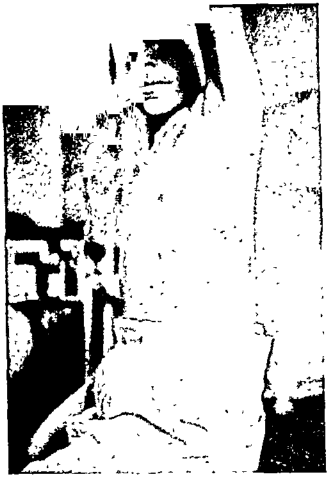

Fig. 5. Topografía, tamaño y dirección de la herida quirúrgica cicatrizada

rior, estaban dolorosos a la presión. La exploración del area precordial, del mediastino y del abdomen, no arrojó ningún dato de anomalía. La fluoroscopía del tórax en posición postero-anterior, puso de manifiesto que se trataba de un tórax cuyo esqueleto, volúmen y movimientos son normales para la edad del infermo. Las playas pleuro-pulmonares son enteramente normales, mostrándose solo una ligera acentuación de la sombra hiliar en ambos lados.

Movilidad diafragmática normal. En la base del hemitorax izquierdo se aprecia una sombra comprendida entre la novena costilla y el diafragma, limitada hacia fuera por el contorno torácico y hacia adentro por la porción inferior de la sombra cardiaca. El contorno superior de dicha sombra es convexo hacia arriba y hacia afuera, siendo imposible de determinar su límite inferior. El arco inferior izquierdo de la sombra cardiaca y el límite superior de la sombra anormal encontrada, forman un ángulo agudo. La densidad de la sombra, comparable a la de la cardiaca, es menor que la de las costillas. Durante la sístole cardiaca se demuestra una absoluta independencia entre ambas sombras; en cambio, con la inspiración profunda, dicha sombra desciende sincrónicamente con el diafragma, no obstante el cual no es posible definir su límite inferior. A la radioscopía lateral se encontró la misma sombra de convexidad superior, de movilidad sincrónica con el diafragma, e independiente del corazón y de la columna vertebral.

La exploración del estómago, previa ingestión de papilla baritada y en Trendelenburg, hizo ver la absoluta independencia de la cámara gástrica y de la sombra patológica en cuestión. La radioscopía del ángulo esplénico lleno de bario, dió datos semejantes. Por todo lo anterior se confirmó la existencia de un proceso patológico, no inflamatorio, de la base del hemitorax izquierdo, posiblemente de naturaleza neoplásica o quística.

En radiografía en postero-anterior, (Fig. 1) se precisaron y confirmaron los datos obtenidos por la fluoroscopía, ratificándose una vez más la no existencia de tuberculosis pulmonar en actividad. En lo referente al proceso patológico de la base, se encontraron nuevos datos en favor de una neoplasia, como son: límites definidos hacia arriba y hacia afuera; abajo y adentro en parte perdidos por la superposición de la masa neoplásica a la sombra diafragmática, pudiéndose sin embargo diferenciar una de otra, apreciándose así que se trata de una sombra ovoidea con su polo inferior hacia abajo y afuera. Los datos anteriores hacen en parte la diferenciación con un quiste, cualquiera que sea su naturaleza, por no existir la nitidez del límite superior, en línea gruesa o delgada. (Signo de Constantini), ni tampoco el doble contorno en forma de media luna sur [illegible]or (d crito por Brun y Jaubert), llamado por Belot y Peteuil despegamiento del vértice, los que han sido considerados como patoneumónicos de los quistes.

El estudio radiológico del estómago lleno con bario y en Trendelenburg, confirmó la independencia absoluta de este y del tumor, ambos separados por el diafragma. El hecho de que en la radioscopía, al descender el diafragma arrastrara consigo al tumor sin hacer variar el contorno de éste y sin poder definirse el límite neto de la cúpula diafragmatica en contracción, hace desechar la posibilidad de un tumor esplénico que rechazará el diafragma, así como la existencia de eventración diafragmática.

Con el fin de localizar la implantación del tumor, se hizo un neumotorax diagnóstico, que demostró a la radioscopía la absoluta independencia del pulmón colapsado y del tumor, cuya magnitud pudo apreciarse perfectamente, así como su adherencia al diafragma. Puesto que hemos demostrado que el tumor en cuestión no es ni abdominal ni pulmonar, nos queda solo por precisar si es diafragmático o pleural, inclinándonos a aceptar como su origen lo primero, en vista de la escasísima sintomatología pleural, ya que los únicos síntomas y signos que se obtuvieron, corresponden no a una reacción, sino a una irritación de dicha serosa.

Con objeto de desechar definitivamente la existencia de un quiste hidatídico del diafragma, se practicaron las reacciones de Weimberg y de Cazoni, resultando negativas.

La fórmula leucocitaria y la numeración de glóbulos blancos, excepto una eosinofilia de 8 por ciento, fueron normales. El hecho de haber sido un único exámen de sangre y teniendo presentes todos los datos anteriores en contra de un quiste, hace perder a la eosinofilia su valor diagnóstico de una hidatidosis.

Con el diagnóstico de tumor primitivo de la cara torácica del diafragma, quedaba por resolver si era benigno o maligno. El hecho de haberse manifestado desde muchos años atrás, sin haber modificado en lo más mínimo el estado general, sin haber dado metastasis de ninguna clase, ni haber perturbado la pleura suprayacente, inclinan el diagnóstico hacia la benignidad. Sin embargo, por estar el tumor en un órgano fibromuscular y siendo probable su naturaleza fibromatosa o miomatosa, y por evolucionar en un jóven, es siempre de temerse una degeneración sarcomatosa.

Quedando establecido definitivamente el diagnóstico de neoplasia primitiva del diafragma, de naturaleza, hasta la fecha del examèn, probablemente benigna, se planteó la indicación operatoria fundándola en lo siguiente: lo molesto de los síntomas subjetivos que tenían al enfermo reducido a una relativa inactividad física; al peligro de que se degenerara dicho tumor o bien que por su crecimiento, ya que no por su malignidad histológica, alterara por compresión órganos tan importantes como el corazón, pulmones y formaciones mediatinales.

Por causas ajenas a nuestra voluntad no se llevó a cabo la intervención indicada tan pronto como era de desearse, habiendo examinado al enfermo, por este motivo, otros médicos, quienes dudando del diagnóstico, que les fué dado por el mismo enfermo, practicaron endoscopía pleural y neumoperitoneo, confirmando en todo el diagnóstico antes dado, de tumor primitivo de la cara torácica del diafragma.

Con el diagnóstico citado, estando correctas todas las pruebas pre-operatorias y con la preparación especial previa a una intervención intratorácica, practicamos la operación planeada, el 4 de julio de 1940 previo neumotorax y con anestesia por ciclopropano a hiperpresión, llevando la asepsia del campo hasta el muslo del mismo lado por si hubiese sido necesario hacer suturas con facia lata o ingertos plásticos al diafragma.

El trazo de la incisión (Fig. 5), comprendió de la línea escapular a la mamaria del lado izquierdo, siguió el trayecto de la novena costilla la que, después de la sección de los planos musculares a ella superpuestos, fué resecada subperiósticamente en la misma magnitud de la incisión. Sobre la parte media del lecho costal, fué abierta la pleura parietal y colocado el separador. El tumor, perfectamente encapsulado, de forma y volúmen semejantes a un corazón de buey, estaba implantado en la parte anterior y periférica del diafragma, contrayendo adherencias con la décima y onceava costillas; con esta última suficientemente recias para no dejarlo movilizar en las maniobras de aislamiento del pedículo. De la parte media de la incisión se llevó otra hacia abajo, perpendicular a ella y fueron resecadas una pequeña parte de la décima y onceava costillas, quedando la porción de esta última adherida al tumor (Figuras 6 y 7). Se liberó la masa tumoral de las adherencias al pericardio, hacia dentro, y el pedículo fué seccionado y ligado por transficción.

No habiendo revelado la exploración de los órganos intratorácicos, expuestos a través de la brecha, ninguna anomalía, se cerró el tórax en dos planos sin dejar canalización, pasando unos puntos de refuerzo con seda. El enfermo abandonó la Sala de Operaciones con 80 pulsaciones por minuto y presión arterial máxima de 120 y mínima de 65 milímetros de mercurio; quedando durante 24 horas sujeto a la administración constante de oxígeno concentrado poco más o menos a 40 volúmenes por ciento. La sección del tumor mostró, macroscópicamente, un lipoma simple.

La evolución post-operatoria fué perfecta y sin contra tiempos durante cinco días; al sexto día, y después de un esfuerzo brusco y enérgico del enfermo, se formó un pequeño hemotorax sin más síntoma que la curva febril característica de los hemotorax no infectados, tos seca, y los datos de exploración fueron los de un derrame pleural pequeño. Como único tratamiento se hizo una punción evacuadora al octavo día, y el enfermo abandonó el Sanatorio, por curación, el 15 de julio, diez días después de operado.

El exámen anatomo-patológico de la pieza hecho por el Dr. Isaac Costero se transcribe íntegramente a continuación: "La Tumoración enviada para su estudio anatómico mide 82 x 75 x 45 mm., pesa 110 gms., tiene volúmen de 140 cc. flota en el agua pero no en el alcohol. Está correctamente limitada por una cápsula conjuntiva a la que se encuentra adherido un fragmento de hueso costal de 40 mm. de longitud que carece de alteraciones macroscopicas. La superficie de sección tiene color amarillento y as-

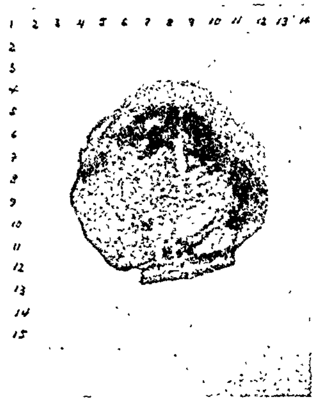

Fig. 6 Fotografía de la pieza anatómica. La mancha clara de la porción inferior derecha es la zona de implantación del tumor al diafragma, abajo de ella se ve el fragmento de la onceava costilla fuertemente adherido.

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El estudio radiológico del estómago lleno con bario y en Trendelenburg, confirmó la independencia absoluta de este y del tumor, ambos separados por el diafragma. El hecho de que en la radioscopía, al descender el diafragma arrastrara consigo al tumor sin hacer variar el contorno de éste y sin poder definirse el límite neto de la cúpula diafragmatica en contracción, hace desechar la posibilidad de un tumor esplénico que rechazará el diafragma, así como la existencia de eventración diafragmática.

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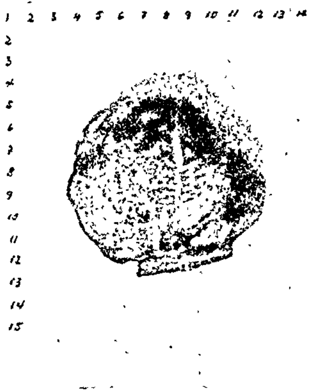

Fig. 6. Fotografía de la pieza anatómica. La mancha clara de la porción [illegible] ferior [illegible] es [illegible] zona de implantación del [illegible] dia[illegible] aba[illegible] de ella se ve el fragmento [illegible] mente adherido.

pecto de grasa. Seccionado en todas direcciones por cortes muy próximos entre sí, se encuentran escasas formaciones conjuntivas fibrosas en forma de travéculas nacaradas y duras de escaso espesor, que se reparten con irregularidad y no producen lobulaciones en la masa del tumor. Cuando un corte delgado de la masa tumoral se deshidrata en alcohol, y se trata por cualquier disolvente de las grasas, queda solamente un armazón esponjoso muy delicado, desapareciendo por completo la substancia amarillenta que rellena los huecos intermediarios. Existen algunos vasos sanguíneos de pequeño calibre que parten de la cápsula y penetran a poca profundidad en el tumor. No se encuentran zonas de reblandecimiento, cristales de jabones, ni de colesterol, depósitos calcificados, ni masas mixoides. Estos acteres anatómicos corresponden a de un tumor benigno de tejido poso.

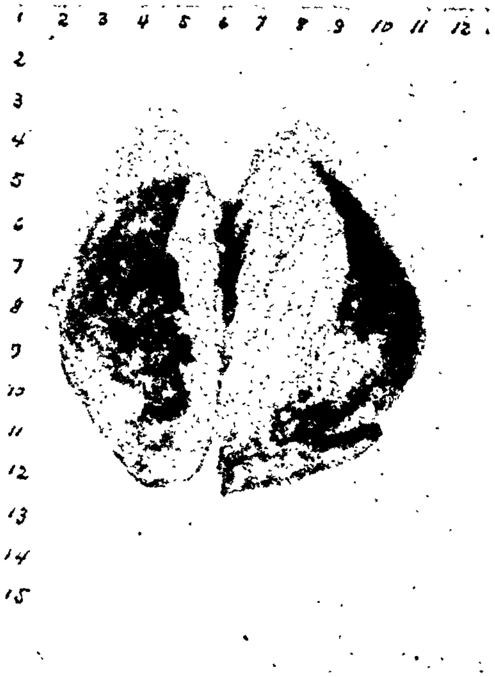

Fig. 7. El tumor seccionado muestra, macroscópicamente, su estructura lipomatosa.

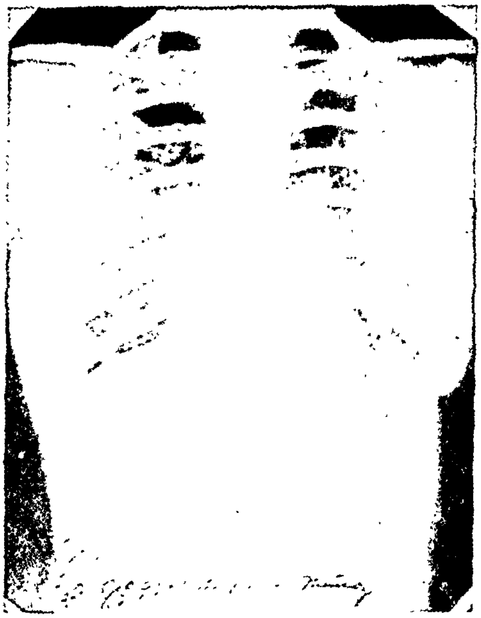

Fig. 8. Radiografía tomada después de la operación.

Dr. Don Darío Fernández quien tuvo la gentileza de acompañarme en la intervención, y al Dr. Don Isaac Costero quien practicó el exámen anatomo-patológico del tumor extirpado.

SUMARIO

El autor presenta un caso de tumor primitivo del diafragma que demostró ser un lipoma en el examen anatomopatologico. Revisa la bibliografía y hace un resumen semiológico de la cuestión, relatando además el tratamiento operatorio del caso, que fué coronado por el éxito.

RÉSUMÉ

L'auteur presente un cas de tumeur primitive du diaphragme que se montra un lipome a l'étude anatomo-pathologique. Il revoit la bibliographie et fait un résumé seméiologique de la question. Il en décrit aussi le traitement operatoire que a été couronne par le succès.

Выводы

Автор докладывает случай примитивной опухоли в мускуле диафрагмы, которая оказалась липомой и описывает его методу лечения.

CONSTITUTION AND BY-LAWS OF THE UNITED STATES CHAPTER

(Continued from page 88)

medical and surgical agencies rests entirely with the Executive Council and its President.

8. In controversies arising between the President and the Executive Council on important matters of policies, or otherwise, the Executive Council shall make the final decision.

9. If necessity arises, the Executive Council shall have the right to create new boards and committees to which it may delegate some of its duties, providing that at all times those new boards and committees shall remain answerable to the Executive Council.

10. The Executive Council shall have the power to call an *emergency meeting* of the House of Delegates providing a thirty (30) day notice is given to its membership by the Executive Secretary in writing.

11. The Executive Council shall have the right to recognize merit by requesting the International Executive Council to confer honorary degrees upon distinguished and outstanding surgeons, regardless of the fact that they are not members of the International College of Surgeons.

12. *Quorum.* At meetings of the Executive Council of the United States Chapter four members and the Presiding Officer, plus a sufficient number of proxies to total a majority of the Council, shall constitute a quorum.

13 *Minutes.* The Executive Council shall keep detailed minutes of its sessions and the first order of business of any meeting shall be the correction and approval of the minutes of the preceding meetings.

14. The second order of business of the Executive Council shall be the correction and approval of the monthly financial reports of the Treasurer.

15. Any member of the Executive Council failing to attend two successive meetings of the Council without adequate excuse shall be automatically regarded as having resigned.

16. *Meetings.* There shall be at least four meetings of the Executive Council of the United States Chapter, called by the President or by the Executive Secretary, on the written request of three members of the Council.

ARTICLE XII.

Board of Examiners.

1. The members of the Board of Examiners shall be chosen so as to represent geographical districts of the Chapter.

2. The members serving on that committee shall be persons recognized for their educational and academic attainments.

3. The members of the Board of Examiners, in collaboration with the District Regent shall organize within their own territorial districts examining boards to pass upon applications and to conduct qualifying examinations of applicants

4. The chairman of the Board of Examiners shall gather all possible information concerning the professional, ethical and moral fitness of the candidates.

5. He shall arrange for candidates examinations and clinics and provide for suitable examinations and see that judges be provided to attend the examinations and the operative clinics of candidates.

6. After having gathered all possible information concerning the candidates he shall submit impartially the results of his investigations to the Executive Council sitting as Committee on Credentials.

7. The chairman of the Board of Examiners shall have the privilege of making recommendations concerning the acceptance, postponement or rejection of candidates without making the recommendations mandatory.

ARTICLE XIII.

Credential Committee.

1. The duties of the Credential Committee shall be to award, withhold or for substantial reasons, suspend or cancel membership credentials already given. In conferring or withholding degrees to applicants, the Committee on Credentials, shall be guided by the recommendations of the Bo[illegible] however [illegible] mar[illegible]

2. [illegible] on C[illegible]

(Cont[illegible]

Unusual Cause of Uterine Bleeding

Retained "Gold Button" Pessary

MORRIS WEINTROB, LT. COMDR. M.C., U.S.N.R.,
AND DAVID I. WEINTROB, 1ST LT., M.C., U.S.A.

ALTHOUGH up to 1938, only a few articles discussing either the "gold-button" or Graefenberg ring appeared in the literature, Dickinson stated in 1926 that he had personally viewed a woman physician's case history record of 1,000 "wishbone-stem" pessaries.

The present case report is added to the literature, even though it is our sole experience with the subject, in the hope that it may teach a lesson that might otherwise be overlooked.

A physician confronted with the problem of uterine bleeding hardly ever, if at all, considers the "gold-button" or Graefenberg ring as a possible etiologic factor. Indeed, none of the standard textbooks refer to the subject nor can either of us recall any mention of the matter during our student days.

A study of the literature revealed a number of interesting findings. These pessaries, even when well retained, do not prevent conception. Gummert, discussing a paper by Clark,[1] reported 78 abortions in 92 patients who became pregnant despite the pessaries. Of these, 87 per cent were septic, 37 per cent developing peritonitis, with 10 fatalities. Reist, referred to by Clark, described 17 fatalities as the result of perforation of the uterus by a Graefenberg ring. Potter[2] and Cregan[3] added further fatal cases.

Spontaneous expulsion of either type of pessary may take place without the knowledge of the patient, thus giving the latter a false sense of security. In 5 of 26 cases of expelled Graefenberg rings reported by Leuenbach,[4] pregnancy came as a complete surprise. Green-Armitage[5] added a case of infected abortion after 9 weeks of pregnancy, with a Graefenberg ring being found in the expelled chorion.

The presence of such a pessary also does not always lead to spontaneous abortion. In one of Potter's cases a Graefenberg ring was removed at the time of delivery. In another of his cases, a stem pessary was removed in the seventh month, with the patient continuing to full term and normal delivery.

Occasionally, it has become necessary to remove such a pessary because of marked abdominal cramps, profuse leukorrhea, excessive menstrual flow, or even persistent intermenstrual bleeding. Of interest in this connection is the case reported by Kimbrough and Tompkins,[6] wherein removal of a Graefenberg ring was done in the second month, with the *patient continuing to full term.* A previous pregnancy had ended in miscarriage in the eighth month.

Unfortunately, an occasional hysterectomy has been required. In a case reported by Daveo and Prat,[7] a "gold-button" pessary encrusted in the cervix and uterus of a 61-year-old woman was the real cause of an intermittent and irregular metrorrhagia, which induced them to perform a complete hysterectomy through fear of the presence of carcinoma. The pessary had been inserted 31 years previously, its insertion completely forgotten by the patient, and the possibility of such an etiologic factor never having entered the minds of either of her attending physicians. Adair[8] discovered a pessary in a 51-year-old patient upon whom he performed a hysterectomy, in which instance the "wish-bone" had been present for 15 years. Sussex[9] and Arnold[10] added 2 cases of hysterectomy in young women as an aftermath of such pessaries.

Ordinarily, the average physician does not make an X-ray examination of the pelvis a standard pre-operative requirement. If such were the usual practice, less radical procedures might result in cases of otherwise unsuspected retained pessaries.

CASE REPORT

H. G., age 22, married, consulted one of us in February, 1942, because of almost constant vaginal bleeding. She had been married three and one-half years, and had taken no precautions for the latter two years. Injections by a previous physician had been administered throughout August and September, 1941, and again in December and January, 1942, without any cessation of the vaginal bleeding. Abdominal cramps preceded what she recognized as her regular menstrual period, as well as during practically the entire intermenstrual period. At most, she was occasionally free from staining for four or five days a month

A history was obtained to the effect that through the first year of her marriage she wore a "gold button." At the end of the year she returned to the physician, who had inserted the pessary, for its removal. She stated that the doctor had told her it was broken, apparently having removed the cap and then doing nothing further about the other part. According to her statement, his comment was: "I guess you lost the other part."

On examination, the cervix presented no erosion, no cervical polyp was evident, and there was a slight bloody discharge coming from the endocervical canal. The tubes and ovaries felt normal, although the left ovary was slightly tender. The uterus was in good position, normal in size, with the sensation of a small mass on the left aspect of the anterior surface of the fundus, about a split pea in size. This was at first interpreted as a small, subperitoneal fibroid.

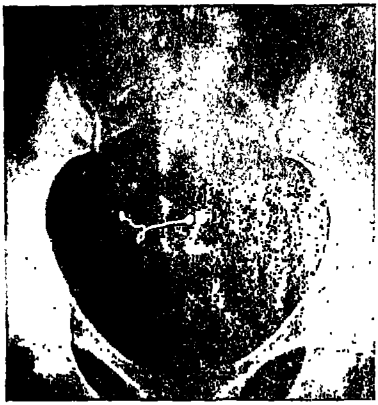

Fig. 1. Broken "gold button" pessary in utero.

In view of the history of a gold spring pessary having been inserted, the cervix was probed and the impression was obtained that a metallic substance was present in the endocervical canal. X-ray examination of the pelvis showed the presence of a wire-shaped type of foreign body, with blunt ends which gave the impression of being the remnant of a pessary (Fig. 1). The roentgenologist stated "it is probably within the uterus."

The patient and her husband were advised of this finding and informed that an attempt would be made to remove the broken part of the pessary by dilatation of the cervix. If any difficulty were encountered as a result of the broken part of the shaft being imbedded in the cervical canal and extensive manipulation to free it be required, because of the tendency for one of the prongs to distend the wall of the uterus and the consequent danger of perforation du [illegible] lation, a hysterotomy or [illegible] might be necessary.

On March 1, 1942, the patient was operated on under general anesthesia. The cervix was dilated. The rough, broken, corroded end of the shaft of the spring button pessary was found imbedded in the left wall of the endocervical canal. It was gently freed, care being taken not to exert force upward in order to prevent perforation at the fundus by the imbedded left prong. By means of a curved stone-crushing forceps, the shaft was grasped and withdrawn from the uterus with ease. The endometrium was then gently curetted. The patient was discharged from the Adelphi hospital on the following day in good condition.

On April 10, 1942, pelvic examination was negative. Menstruation had occurred on March 13th and lasted three days and was normal in amount. There had been no intermenstrual bleeding, no vaginal discharge and no abdominal cramps. The curettings were reported as follows: "Curettings are composed of blood with only an occasional piece of endometrium present. Surface of this endometrium is thrown into folds and infoldings l both the surface and the glands are lined several layers of columnar epithelium with al nuclei that are at various levels. Surrounding stroma is compact. Stromal cells are darkly stained and have little or no cytoplasm and there is an extravasation with erythrocytes. *Diagnosis:* Hyperplasia of the endometrium (proliferative phase)." The patient has since been delivered of a normal infant.

SUMMARY

The author discusses the danger of the use of pessaries and their relative inefficiency. He also reports a case in which part of a broken pessary was responsible for almost continuous uterine bleeding in a young woman 22 years of age.

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9. Sussex, L. T.: Penetration of the Uterus by Gold Stem Pessary. J. A. M. A., 100:1490-1491, 1933.
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SUMARIO

El autor presenta un estudio de el peligro de el uso de pesarios y su relativ inutilidad. Tambien reporta un caso in el cual parte de un pesario roto fue responsable de una hemorragia uterina casi constante en una joven de 22 años.

RÉSUMÉ

L'auteur présente une étude sur les dangers qu'entraîne l'emploi des pessaires. Il démontre aussi leur insuffisance relative. Il rapporte un cas dans lequel un pessaire brisé entraîna une hemorrhagie uterine continuelle chez une jeune femme agée de vingt-deux ans.

Выводы

Автор сообщает наблюдения об опасности употребления пессария и его недостатки. Он докладывает случай в котором кровотечение из матки у женщины 22-х лет продолжалось почти без перерыва и причиной которого была часть поломеннаго маточного кольца (пессария).

(Continued from page 145)

Delegates, or the Board of Trustees to consider the Amendment presented and to vote upon it." ARTICLE XX, Paragraph 4 is hereby amended by striking out the whole Paragraph 4 thereof, and adding the words "and officers" to ARTICLE XXII on line two immediately following the words "various committees." AND, WHEREAS, it appears necessary to clarify the By-laws of the International College of Surgeons, BE IT, THEREFORE, RESOLVED that said By-laws are hereby amended as follows: ARTICLE III, Paragraph 5 of said By-Laws is amended by striking out Item 4 under the heading "Opening Session" and by renumbering the other items following said item. ARTICLE III, Paragraph 5, Item 8 thereof, under the heading "Opening Session" is hereby amended by striking out the words "Election of Committee on Nominations" and substituting in lieu thereof, "Appointment of Committee on Nominations." ARTICLE IV, Paragraph I thereof shall be amended by striking out Paragraph I as it now appears and by substituting in lieu thereof, the following: "I. *Committee on*

(Continued, page 166)

Momento Quirúrgico de las Úlceras Gastro-Duodenales*

(Surgery in Gastric and Duodenal Ulcers)

ANTONIO J. CASTILLO, M.D.
CARACAS, VENEZUELA

SUMMARY

The term "gastric and duodenal ulcers" is applicable to those ulcerated areas exposed to the gastric juice. The author concludes that all ulcerations, acute and subacute, should receive prompt treatment because of their tendency to become chronic. Surgery should not be delayed if favorable results are expected in these cases. Gastrectomy is recommended as the method of choice, since the mortality rate is very low (2 per cent) in the hands of well trained surgeons. Roentgenographic studies should confirm the diagnosis in all cases. The author discusses the pre-operative preparation of the patient, criteria concerning the anesthesia and the surgical technic.

DECIAMOS en nuestro trabajo de Incorporación como Individuo de Número a la Academia Nacional de Medicina: Presentamos un tema de cirugía que conceptúamos de gran importancia entre nosotros, dados los magníficos resultados terapéuticos que con él se obtienen, pero qué desgraciadamente no nos es fácil de alcanzar, porqué no hemos llegado todavía a un mutuo acuerdo entre cirujanos e internistas.

Con R. Jack siempre hemos unido en el mismo vocablo (gastric and duodenal ulcers) los procesos ulcerosos de aquellas regiones expuestas al contacto del jugo gástrico.

Tratándose del Congreso del Colegio Internacional de Cirujanos, donde están presentes, todos, hombres que conocen bien la materia y que muchos de Uds. son maestros en el arte y deseando tan sólo traeros una humilde colaboración, trataremos en esta breve exposición, que reglamentariamente no debe pasar de *treinta minutos*, de daros un sencillo aporte personal a este problema al cual nos hemos dedicado desde el año de 1923. De 1923 al 1932 practicamos diferentes técnicas y métodos quirúrgicos para el tratamiento de las úlceras del estómago y duodeno, con muy diferentes resultados terapéuticos; desde el año de 1932 hemos practicado en esta affección casi exclusivamente la gastro-pilorectomía y las conclusiones que expondremos son el *resultado de las últimas ochenta* (80) gastro-pilorectomías practicadas en los años de 1939-1940 y en el primer semestre del año en curso (Casos de los doctores M. Corachan y A. J. Castillo).

No creemos traer nada nuevo, ni original, sino tan solo exponeros un criterio y una conducta que nos ha dado magníficos resultados terapéuticos y una técnica operatoria, que sin ser personal, reune una serie de tiempos que no están así descritos en los textos y que nos parece facilitan grandemente el procedimiento quirúrgico.

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* Presented at the Third International Assembly of the International College of Surgeons held in Mexico City, August, 1941.

Ojalá podamos operar algún caso aquí y poner de manifesto la exactitud de lo que nos permitimos exponer ante el consciente criterio de Uds.

Las diferentes terapeúticas de esta afección basadas en los trabajos de Leriche, en la concepción de Pribram, en la tesis defendida por Balint, en el Método de Hugh Maclean o en la Memoria del Profesor de Baco, han dado en manos de sus autores resultados satisfactorios según cada uno de ellos y cualesquiera de las teorías patogénicas del ulcus gastroduodenal, que se admita la teoría gástrica, hiperclorhidrica, mecánico fúncional, infecciosa, neurovegetativa, vascular, constitucional o por carencia de aminoacidos, no llegan a establecer en todos y cada uno de los casos una conducta definitiva y clásica según la sintomatología que se nos presente, pero de todo ello hay un hecho real y claro que debe privar en el criterio de los cirujanos y es que no hay duda que toda ulcera aguda y reciente debe ser tratada por un tratamiento médico consciente y suficientemente largo, que trae la curación de ella en un porcentaje elevado de la afección, pero, cuando la úlcera entra en el período de la crónicidad y aquellas tratadas medicamente por tiempo suficiente sin resultado ostenciblemente favorable, debemos decir categóricamente que han pasado al campo del bisturí.

Hemos llegado a este criterio rádical pues estamos cierto que todas estas úlceras crónicas no se curan de otra manera y aunque hay pareceres muy diferentes de autores eminentes que hablan de indicaciones quirúrgicas absolutas, relativas u opcionales, las primeras indiscutibles, las segundas practicamente lo mismo y las ultimas no significando sino una demora peligrosa, pues estas esperas pueden acarrear, algunas veces, complicaciones mortales y en otras una transformación malígna de una úlcera gástrica, para llegar aún en los casos de curación a la estenosis pilórica por cicatrización conjuntiva inextensible y al consiguiente acto quirúrgico liberador.

Estas diferencias de criterio se deben a que los internistas todavía desean conservar bajo el dominio de la Medicina esta afección, que cada día más se acerca al campo de la cirugía y quizás sea ésta una causa del fracaso debido al estado en que se nos presentan algunos pacientes agotados física y moralmente por un padecimiento de 20 a 30 años y en los cuales han ingerido enormes cantidades de drogas, por tanto, fuera de la úlcera agúda, creemos que toda úlcera gastroduodenal crónica, es una afección quirúrgica y que solo este tratamiento produce su curación y garantiza el porvenir de nuestro enfermo.

Todos saben hoy el valor que tiene el interrogatorio o anamnesis de un enfermo digestivo habilmente guiado. Hoy tenemos signos clínicos que nos permiten por ellos solos hacer el diagóstico de úlcera gástrica o duodenal, pero la Clínica es incapáz ella sola de hacer una exácta localización de la úlcera y los exámenes radiográficos y radioscópicos son de una importancia capital.

La radioscopía es siempre interesante, permite controlar el modo de repleción y evacuación de la región pilórica y el bulbo duodenal. Es sin embargo insuficiente pues deja escapar toda una serie de detalles teniendo que recurrir a la radiografía.

Basado en otros tiempos el diagnóstico de la úlcera duodenal sobre argumentos exclusivamente clínicos y creyéndose durante largo tiempo que todo enfermo que presentaba dolores tardíos calmados por ingestión de alimentos debía ser considerado como un caso de úlcera duodenal, nos condujo ésta fórmula a un cierto número de laparotomías inútiles, pues en muchos casos el cirujano no descubría ninguna úlcera a la intervención y sí practicaba a pesar de la duda una gastro-enterostomía no prestaba ningún servicio útil a su enfermo, sobreviniendo casos en los cuales fué necesaria una reintervención con el objeto de suprimir la anastomosis.

La ayuda radiológica en estas afecciones requiere un perfecto conocimiento del método y de los detalles de técnica, posición, momento favorable e interpretación exacta de los hechos.

La radiografía permite afirmar el sitio de la úlcera sobre el duodeno. El médico buscará el momento de una crisis evolutiva y fuera de todo fenómeno hemorrágico. Repetirá a intervalos frecuentes esta exploración, si la primera no ha dado resultado favorable. El resultado negativo de las placas no debe hacer abandonar el diagnóstico que los signos clínicos hacen suponer. Hay que hacer una serie de radiografías que muestren los aspectos de replesión y evacuación del bulbo duodenal.

Todo cirujano debe, en fin, saber interpretar estas radiografías. La ausencia de la imágen radiográfica típica al nivel del borde interno del bulbo no le autoriza a negar el diagnóstico de úlcera, el debe, al contrario buscar el nicho de cara, éste puede no existir sino en una o dos placas pero ello basta para afirmar el diagnóstico.

Hoy tenemos medios variados de investigación, que no mencionaré por ser ello innecesario ya que son conocidos de todos Uds., pero que permiten con exactitud hacer el diagnóstico diferencial entre las úlceras del estómago o duodeno, con: las afecciones locales gastro-duodenales, neurosis gástrica, simples dispepsias, gastro-duodenitis, cáncer gástrico, tumores benignos, sífiles, tuberculosis, síndrome doloroso epigástrico por ptosis gástrica o duodenal, divertículos, síndrome gástrico por distensiones y vólvulos estomacales, colecistítis, apendicítis, pancreohepatitis y hernia epigástrica.

La cirugía gástrica en manos de cirujanos expertos ha mejorado notablemente el porcentaje de mortalidad, hoy no debemos aceptar en las gastrectomías por úlcera gástrica o duodenal un porcentaje mayor de 2 por ciento.

Hemos tenido dos fracasos en estos ochenta casos lo que daría 2 y ½ por ciento, pero es necesario darse cuenta de que el número de casos de que trato es insuficiente para afirmar un índice de mortalidad.

Por otra parte tenemos la esperanza de que aún ese porcentaje de mortalidad de 2 por ciento disminuirá, no por mayor habilidad quirúrgica de los que practicamos ésta clase de cirugía, ni por mejoras en las técnicas empleadas, sino porqué los médicos internistas se convencerán algún día de la inutilidad del tratamiento médico de las úlceras crónicas y los enfermos llegarán a nuestras manos en mejores condiciones, menos agotados y sin haber esperado para resolverse al acto quirúrgico curativo, veinte o treinta años de vida miserable que agota no sólo sus fuerzas, sino también su sistema nervioso y los hace transformar, como todos los hemos visto en seres verdaderamente desgraciados, que llevan una vida insoportable, no viviendo sino para su estómago, hasta el momento que ya cansados de sufrir recurren a nosotros, no por confianza sino por desesperación.

EXAMENES Y PREPARACIÓN PRE-OPERATORIA

"Todo enfermo que se queje de disturbios dispépticos, puede no sólo tener una úlcera gástrica o duodenal sino también una dispepsia refleja, debida a una apendicitis, una colecistitis, etc.

"Todo dispeptico será sometido a un exámen radiológico completo. El cirujano no sólo necesita practicar un exámen del estómago, sino también de todo el tránsito intestinal. Una simple radiografía es insufici[illegible] de [illegible] veces, a menos de [illegible] patognomónica, [illegible] penetrante.

"Es necesario saber si hay o no ptosis intestinal, cuanto tiempo la substancia opaca se detiene en los diferentes segmentos del intestino; si hay o no extasis ileal; es decir: una serie de exploraciones y radiografías capaces de dar luz sobre el caso clínico en cuestión.

"El exámen químico es también indispensable. Es necesario saber el grado y curva de la acidéz, así como los diferentes detalles relativos al quimismo. Es necesario hacer un exámen completo del sistema nervioso que nos pueda indicar una tabes frusta.

"Es necesario hacer un exámen de sangre con dozage de la azotemia. Es necesario despitar la sífilis. Un gran número de úlceras son de origen sifilítico y necesitan un tratamiento específico. En las orinas buscar la acidosis, frecuente en los sujetos deprimidos y que requieren un tratamiento anti-acido.

"Hacer la prueba de la sulfo-fenolaleina para controlar el estado de la tenia."

Por otra parte el clínico debe tener en cuenta cuando examina a un gastropata, que casi todas las personas que vienen a nosotros quejándose del estómago no sufren de el; así nos dicen los maestros que de diez enfermos que se quejan de dispepsia atribuída al estómago, nueve no tienen ninguna lesión gástrica.

Siguiéndonos por las indicaciones de los maestros Pauchet (francés) y Baldo Rossi (italiano) además del examen clínico preciso y de los exámenes de sangre, orina, quimismo gástrico y documentación radiológica, nuestro enfermo requiera una buena desinfección de la nariz, de la garganta, de los dientes y vaciar el contenido del intestino grueso por medio de lavados adicionados de aceite o glicerina.

Lavamos el estómago durante los tres o cuatro dias anterioreas del acto operatorio, no sólo para desinfectarlo, sino también para acostumbrar al enfermo por si fuere necesario lavarlo post-operatoriamente. Debemos recordar que todo operado que vomita hay que lavarle el estómago. Esta medida nos ha sido de verdadera utilidad en la práctica y estamos convencidos de su eficacia, a pesar de que algunos cirujanos opinan que estos lavados pre-operatorios son innecesarios.

ANESTESIA

Hemos proscrito completamente las anestesias generales por inhalación y la raquianestesia. Recurrimos generalmente a la anestesia esplánica posterior y local del campo operatorio.

No dudamos que la anestesia esplácnica anterior es muy buena, pero no es fácil realizarla en infinidad de casos y ya en la mesa operatoria tendríamos que recurrir a otras anestesias que no deseamos tener que usar.

La esplácnica posterior la prácticamos por medio de dos inyecciones laterales de 30 cc., cada una, de una solución de novocaína al 1 por ciento. La local del campo operatorio la hacemos con una solución de novocaína al 1 por 200.

En ciertos casos, especialmente símpatico-tónicos la anestesia local es insuficiente y en ellos, como en muchos otros operados en años anteriores, hemos practicado como anestesia el Evipán sódico por vía venosa.

"Los resultados post-anestésicos han sido excelentes. Esta clase de enfermos la toleran admirablemente y se obtienen en ellos, debilitados como llegan a la mesa operatoria, una anestesia completa con pequeñísimas cantidades.

"Podemos decir que en un 99 por ciento de los casos desaparecen los vómitos y angustia post-operatorio y no decimos en el 100 por ciento de los casos pues en uno de nuestros operados hubo que lavarle repetidas veces el estómago, durante el período post-operatorio, a pesar de haberle sido administrado la pequeña cantidad de 0.80 centígramos de Evipán, tuvimos en él una grave complicación por un estado de hipocloremia que necesitó una remineralización intensa y que nos hizo temer por unos días un círculo vicioso.

"Siempre nos ha servido el Evipán por si sólo para llevar a cabo nuestras operaciones, con anestesia desde 45 minutos, tiempo mínimo empleado en nuestras gastro-pilorectomías, hasta una hora y veinte minutos que ha sido la operación más larga practicada con anestesia por Evipán, por encontrarnos ante un caso de úlcera degenerada de la pequeña curvadura y fuertemente adherida al pancreas, en la cual fué necesaria una labor ardua y minuciosa."

En el Hospital Vargas de Caracas, pero no en un caso de mi Servicio se ha llegado a anestesias de una duración de dos horas veinte minutos y la mayor cantidad inyectada, en dosis fraccionadas, ha sido de 17 cc. de la solución de Evipán al 1 por 10.

Qué observamos nosotros: ¿que dicen los enfermos?

Anestesis perfecta, silencio abdominal absoluto, no comparable sino con el de las mejores raqui-anestesias y despertar tranquilo. No acusan *dolor de cabeza, ni vomitan* y no dan ningún signo subjetivo desagradable.

¿QUÉ OPERACION PRACTICAMOS?

En todos los casos de úlcus gástrico o duodenal y siempre que ella sea posible la única que consideramos como tratamiento curativo. La gastro-pilorectomía (Polya-Reichel, procedimiento Finsterer con pequeñas modificaciones personales (Corachan y Castilla) que expondrémos:

Ulcus Gástrico.—El procedimiento curativo es la supresión del piloro y de toda la porción del estómago sobre el cual el ulcus evoluciona. Corrientemente se hará la gastro-enterostomía por implantación del muñón gástrico en la convexidad del yeyuno (Polya). Siempre que sea posible el procedimiento trasmeso-cólico posterior, con asa corta, es el que dá los mejores resultados (Polya-Reichel).

La anastomosis de la brecha total gástrica al yeyuno con fijación de la brecha meso-cólica al estómago (Polya-Reichel-Finsterer) que es el procedimiento empleado por nosotros en todos nuestros casos, es garantía suficiente del buen funcionamiento de la boca anastomótica.

En los ulcus situados muy altos practicaremos la gastrectomía en canal de Panchet, la cual los cura completa y *definitivamente* sin aumentar la mortalidad operatoria.

Ulcus Duodenal.—¿Qué operación prácticaremos para el úlcus duodenal? La Gastro-pilorectomía. ¿Porque? Porqué en estos casos y aunque el estómago está sano y tan solo lesionado el duodeno, éstos son los casos con fuerte hiperacidéz en los cuales el sujeto hace con gran frecuencia un ulcus yeyunal secundario algunos meses más tarde.

Suprimiendo la mitad del estómago hiperpéptico se realiza la hipopepsia lo que previene el ulcus yeyunal. Si el operador quita el duodeno ulcerado hace el mejor de los procedimientos, pero si está duodenectomía es *muy difícil*, la *úlcera* está situada baja y la disección duodeno pancreatica sangra abundantemente, no debe insistirse en hacerla, se deja el duodeno excluído en virtud de la resección gástrica y se hace la anastomosis gástro-yeyunal por implantación termino lateral (Polya).

Es necesario recordar que las úlceras duodenales no degeneran sino excepcionalmente y además que la úlcera en un medio constantemente alcalino cura definitivamente.

En los casos de urgencia debe hacerse la operación mínima aunque tengamos que reoperar nuestro enfermo algunos meses más tarde, sin embargo, si las lesiones son enormes, la constitución general del sujeto se pres[illegible] el [illegible]ujano es experimentando, se [illegible] ierto casos de urgencia practicar una gastrectomía.

Proporcionar la importancia de la operación a la gravedad del mal y a la resistencia del enfermo. No temer operar al enfermo dos veces, para evitarle morir en una sola operación.

Mas vale curar al enfermo en dos operaciones, que matarle en una sola (Pauchet). Esta es la única indicación que hoy creemos existe para una simple, gastro-entero-anastomosis, que significará el primer tiempo de una gastrectomía ulterior.

ALGUNOS DETALLES DE LA TÉCNICA OPERATORIA

La liberación de la gran curva dura no la practicamos como aconseja Temoin de un golpe de compresa, sino por ligadura minuciosa entre dos pinzas conservando la arcada vascular (Corachan).

La sutura del cabo duodenal la hacemos en tres planos, a los dos de uso coiente agregamos uno tercero entre la rosa duodenal y la cápsula pancreatica (Corachan).

Cuando tememos encontrarnos ante una úlcera degenerada hacemos la recepción total del epiplón gástro-colico donde se alojan ganglios, fuente de futuras metastasis.

Todas nuestras suturas las hacemos con catgut crómico 00, con aguja atraumatica (Castillo).

Las suturas sero-serosas posterior y anterior las hacemos con puntos de Cushing. La sutura total posterior con puntos en Feston.

La sutura total anterior con puntos de Connel, con aguja curva y porta aguja (Corachan) o con aguja recta y pinza de Jùdd (Castillo).

Hecha la sutura del cabo duodenal y cuando vamos a trabajar sobre el estómago y antes de proceder a hacer la sutura sero-serosa posterior, abrimos de una véz la brecha meso-colica y fijamos su borde posterior a la cara posterior del estómago, este pequeño detalle es de gran utilidad y lo aconsejamos a todos los que practican esta cirugía (Corachan).

Cuidados post-operatorios immediatos.—Son de todos Uds. conocidos y tan sólo quiero llamar la atención del hecho del uso del aparato de aspiración continua o gastro-evacuador, con su uso no es necesario practicar lavados del estómago, pues éste está vacío continuamente, a la vez que permite suministrar agua a nuestros operados desde el primer momento, lo que no solo mitiga la sed sino que sirve de lavado constante. Nosotros seguimos en ese sentido la conducta siguiente: inmediatamente que regresa el enfermo a la cama se le pasa por una de las fosas nasales una sonda de succión gástrica y se conecta con el aparato. Se le suministra a nuestro enfermo desde el primer día medio vaso de agua cada dos horas, poniendo a funcionar el aparato inmediatamente después. Con su uso hemos obtenido magníficos resultados.

"A los que dicen que la gastrectomía por ulcus duodenal es mucho más grave se les debe contestar: que es necesario tomar en cuenta los antiguos operados que mueren algunos meses o algunos años más tarde después de la gastroenterostomía."

Nosotros practicabamos gastro-entero-anastomosis hasta mediados del año de 1933, pero de ahí en adelante, bien entendido que con sus excepciones, no solo prácticamos gastrectomías en los ulcus gástricos, sino también en las úlceras duodenales.

¿Porqué algunos cirujanos no están de acuerdo en reducir la práctica de la gastro-enterostomía?

El tratamiento del ulcus duodenal es la resección amplia del estómago y duodeno y la liberación de la pequeña curvadura. Esta operación da un 95 por ciento de curaciones definitivas, dejando ese 5 por ciento esquemático, ya que la úlcera es una consecuencia y no un accidente, puede reproducirse o estar acompañada de otras lesiones concomitantes.

Si todos los cirujanos no están de acuerdo en la adopción sistemática de la gastrectomía, es porque ella es una operación grave, en manos de aquellos que no sean expertos en esta materia, una de las más bellas y sugestivas ramas de la cirugía.

"La gastro-entero-anastomosis tan solo requiere dos maniobras; una sutura hemostática y una anastomosis bien aplicada, en buena dirección y en buen sitio.

"La gastrectomía con sus variantes requiere la adquisición de 20, 30, 40 maniobras que deben ser ejecutadas automáticamente, automatismo que no se adquiere sino en aquella cirugía que se conoce bien. Las maniobras automáticas hacen las intervenciones benignas, puesto que son ejecutadas siempre correctamente.

"Ahora bien, para que un acto pase en el sub-conciente, para que sea reflejo, automático, es necesario repetirlo mucho. Es necesario pues, que el cirujano que practica la gastrectomía se haya creado una experiencia especial por el número de casos tratados (Pauchet)."

SUMARIO

Se acepta la denominación de úlceras gástricas y duodenales, aplicable a los procesos ulcerosos de aquellas zonas expuestas al contacto del jugo gástrico. Sirven de base principal a la comunicación ochenta gastropilorectomías. Se considera que toda ulceración aguda y reciente es tributaria inmediata del tratamiento médico, pero la tendencia a la cronicidad, especialmente en los casos que no se han beneficiado con la terapéutica médica, plantea desde luego la conducta quirúrgica radical. La indicación operatoria formal debe prevalecer sobre esperanzas infundadas y esperas peligrosas, si se desea actuar en condiciones adecu das y favorables. Sin descartar el valo clásico de la clínica pura, se reconoce l justa importancia que tiene la explora ción radiológica, especialmente radiogr fica, para el diagnóstico correcto. S menciona la conveniencia de la gastrec tomía, cuyo porcentaje de mortalidad s afirma no mayor del 2 por ciento en ma nos de cirujanos expertos y en moment oportuno. Se hacen citas sobre el estudi y preparación preoperatoria del enferm ulceroso, criterio sobre anestesia, y algu nos detalles de la técnica usada en la intervenciones practicadas.

RÉSUMÉ

On emploie le terme "ulcères gastriques et duodénaux" pour désigner le ulcérations exposées au suc gastrique. L'auteur recommande le traitement immédiat de ces lésions qu'elles soient avous on chroniques. Car elles ont une tendance á devenir chroniques. Afin d'obtenir de bons résultats, il ne faut pas retarder l'entervention chirurgicale. L'opération de choix est la gastrectomie dont la mortalité n'est que de deux pour cent dans les mains de chirurgiens entraînés. Il importe de confirmer le diagnostic par l'étude roentgenographique du cas. L'auteur discute la préparation pré-opératoire du malade les criteria par rapport à l'anesthésie et la technique chirurgicale.

Editorials

Carcinoma of the Breast with Negative Biopsy

ASA B. FRIEDMAN (*Bul. Adelphi Hosp., Brooklyn, N. Y.*) reports a case of carcinoma of the breast, which emphasizes the fact that a pathologist's report should be subject to the same limitations as any other observation or symptom, subjective or objective, particularly when the findings are negative and contradictory to the clinical evidence.

A married woman, aged 36, complained of severe pain at the base of the neck, posteriorly, radiating to both arms, especially the left. There was pain also in the lower back and pelvis. The relevant previous history was that she noticed a small mass in her right breast in September, 1941. This was excised for biopsy examination. The surgeon suspected malignancy and was prepared to perform a radical mastectomy. The pathological report stated: "Sections show fat and areas of necrosis and acute inflammatory change. A few glandular structures are present, lined by regular cuboidal epithelium. These glands are arranged in compact acini. There is no evidence of neoplasia. *Diagnosis*: Liponecrosis of the breast. Chronic inflammatory changes." This report influenced the surgeon against further surgery.

When the patient was seen a year later, the mass in the breast had recurred in the form of a multinodular tumor with extension to the axilla and supraclavicular fossa. The patient had been told at the time of the pathologist's report that the condition was not serious and she, therefore, did not return for follow-up examinations. The multinodular mass was attached to the skin and infiltrated the outer third of the breast. Palpable nodes were found in the right axilla and a small node was present in the right supraclavicular fossa. Obviously, the case was hopeless as far as cure was concerned, but it is possible that if further sections had been made at the time the biopsy was done, evidence of malignancy might have been found. In any event, even though the surgeon accepted the pathologist's report in preference to his own correct clinical opinion, the tragic result might have been averted if the patient had been told of the possibility of malignancy and the urgent necessity of remaining under further observation. The case is instructive in that it illustrates the tendency to accept a negative laboratory report as the final diagnosis, instead of considering such reports as merely a complement of the clinical evidence.

A. L. Wolbarst, M.D.

Surgical Isolationism

DISCUSSING the standardization of the surgeon before the Section on General and Abdominal Surgery of the American Medical Association in June, 1914, Dr. J. M. T. Finney defined the surgeon as a member of "a profession ennobled by men actuated solely by their desire to devote their time and their talents to the relief of suffering humanity, willing, yes, at any time, if need be, to lay down their own lives for those of their fellowmen; whose membership should embrace only men of singleness of purpose, unselfish, high-minded, zealous in their efforts to wrest from Nature the keys to her many mysteries; men who unconsciously, perhaps, in character and conduct, reflect in varying degrees the life and spirit of the Great Physician; a profession free from taint of commercialism or graft, in which there shall be no room for the base, the unscrupulous, the ignorant or the unskilled; in which the test for membership has to do only with character and attainment."

Who among us, three decades later, would say that this standard set by Dr. Finney is too idealistic and unattainable? Yet, how close have we come to realizing that standard? Both the science and art of surgery have come far since the early days of the barber surgeons. A tremendous progress has been made since the discovery of anesthesia and each year thereafter surgeons have become more skillful and more daring. With the increase in knowledge and skill, have the surgeons themselves become equally great in character and purpose?

From earliest times one of the greatest misfortunes for the advancement of surgery has been secrecy among the profession. Just as Peter Chamberlen's invention of the forceps early in the Seventeenth Century was kept a family secret; just as Colot kept secret for many years the method of lithotomy that had been passed on to him, and just as rhinoplasty had been concealed for generations by the Branca family, so have too many modern surgeons kept secret their own discoveries and inventions to the glorification and material benefit of themselves. The great ethical standard of the medical profession that demands the sharing of all medical discoveries for the good of mankind and without profit to any individual, is sometimes willfully forgotten. To some measure, time has eroded this cancerous spot from the escutcheon of surgical endeavor.

A modern influe[illegible] tard in the advance of su[illegible] in litical smugness that has crept into the ranks, equalling sometimes the smug conceit of a Paracelsus, whereby a surgeon is rated not by his individual attainments but by his political backing. Appointments to hospital staffs and election to membership in specialized groups are determined by a select few who allow personal bias to determine a surgeon's fitness for recognition. Too often selection is made in the manner of a collegiate fraternity rather than in a truly scientific procedure. To a successful skillful surgeon this bias against him does little harm, except to his self-esteem, but to the fine young surgeon who is earnestly struggling toward the idealism of Dr. Finney, it may be a direct factor in retarding his professional growth. He is denied the close contacts with the learned men of his chosen profession, from whom he might gain so much in education and inspiration.

The evil effects of this exclusion are but nil at this time of a world war when every surgeon is needed and is giving his best. But while the learned executives of other professions and of the economic circles are sitting in long conferences, endeavoring to fashion a new world that shall follow the war, a world where individual rights shall be recognized and prevail, what is the surgical profession doing to elevate its own members and what plans is it making for the healing of the peoples of the earth?

Since Pearl Harbor, isolationists have become internationally minded. Great nations, differing from each other in a multitude of ways, have joined forces to defeat a vicious world enemy. After victory is won, representatives will meet at the conference table, endeavoring to lay down a lasting peace. Shall the surgical profession stand idly by and take no part in this great plan?

The International College of Surgeons, since its inception, has had for its platform the "gathering together of eminent surgeons of each Nation, Free State and Dominion of the world into one great organization, with the thought in view that the personal exchange of views of leaders in surgery will do much to advance the science of surgery and also promote a better understanding between those who, in every country, are working for the good of humanity."

The College further seeks to encourage its members to original research. Nationality, creed and race are disregarded in its ranks. No other association in medicine or surgery has so extensively exercised this international relationship. Its membership has been gathered from many nations, elected solely on individual merit. The cultivation of cordial relations and the exchange of surgical information between the Fellows and Members of these countries is continuously encouraged. Above all, its aim is an *entente cordiale* between all existing surgical organizations.

Now, more than ever before, the surgical profession must unite to bring about a better understanding and appreciation of all nations, mutually sharing surgical knowledge and training the less skillful, so that a more perfect manhood may be fashioned to meet the problems of a new world.

M. T.

(Continued from page 156)

Nominations. On the first day of the annual meeting, the President shall appoint a Committee on Nominations consisting of five delegates, if possible, one from each country represented at the meeting. The Committee on Nominations shall report to the House of Delegates, the ticket containing the names of one or more members for each of the offices to be filled at the annual meeting." ARTICLE VII is hereby amended by adding a new paragraph thereto to be known as Paragraph 13, which shall read as follows. "13. It shall be the duty of each member of the Board of Trustees of the International College of Surgeons to attend all meetings of the Board; provided, however, that it shall be a valid excuse for failure to attend if the meeting shall be held in a country other than that in which the member resides. "In the event that a member of the Board of Trustees shall fail to attend three successive Board meetings without forwarding to each of such meetings a

(Continued, page 171)

Fourth International Assembly
In Conjunction with the Eighth National Assembly of the United States Chapter

International College of Surgeons

WAR SURGERY AND REHABILITATION PROGRAM
WALDORF-ASTORIA HOTEL, NEW YORK, N. Y.
JUNE 14 to 16 (incl.), 1943

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FOURTH INTERNATIONAL ASSEMBLY
OF
INTERNATIONAL COLLEGE OF SURGEONS
In Conjunction with Eighth National Assembly of United States Chapter

Waldorf-Astoria Hotel, New York City

June 14-16, 1943

PRELIMINARY PROGRAM

Dr. A. A. Berg, Chairman, Program Committee

The program will have as its main theme, "War Surgery and Rehabilitation." The Assembly has been endorsed by Surgeon General Magee of the U. S. Army and Surgeon General McIntire of the U. S. Navy. If their appointments permit they will endeavor to attend the Assembly and deliver addresses.

The subjects to be discussed include:

WAR SURGERY

First Aid Treatment of the Injured
First Aid and Early Treatment of Disfiguring Injuries
Infected Wounds
Chemotherapy
Transportation of the Wounded
Burns
Gas Casualties
Anesthesia
Air Casualties
Skeletal Injuries
Injuries of Internal Organs (Chest, Abdomen, Genito-urinary Tract)
Injuries of the Brain, Spinal Chord and Nerves
Blast Injuries
Vascular Injuries

REHABILITATION

Plastic and Reconstructive Surgery
Reconstructive Surgery of the Bones and Joints
Physical Therapy
Chronic Diseases Due to War Casualties, Including dominal Organs and the Nervous System
General Allied Subjects

An informal dinner will be followed by addresses given by high ranking officers of the Army and Navy.

The *Scientific Exhibits* and the motion pictures to be shown will be of special interest. There will also be *Military and Rehabilitation Exhibits* presented by various National and State organizations. These will be found in the west foyer on the third floor of the Waldorf-Astoria Hotel. Among them will be a visual demonstration of the work of rehabilitation by the New Jersey Rehabilitation Commission, presenting its curative workshop, under the personal direction of Dr. J. C. Kupper.

The Veterans Administration of Washington, D. C., Dr. Charles M. Griffith, Director, will exhibit charts showing pictures and descriptions of the routine and special measures in *bibliotherapy, occupational therapy* and *physical therapy* used to aid in the treatment of patients in the Veterans Administration hospitals. The Universal School of Handicrafts, chartered by the Board of Regents of the State of New York, and now engaged in a study of creative activities for rehabilitation, will present material and findings in this particular field, under the personal direction of Edward T. Hall, Director.

The Medical Department of the 17th Regiment, New York State Guard, will set up a Regimental Aid Station, under the direction of Donald R. Beck, Regimental Surgeon. The personnell will consist of the medical detachment who will be in daily attendance, the officers attached being Cop tain W. R. Hatfield, Captain John Murphy and Captain Harold Belcher.

PARTIAL LIST OF SPEAKERS

LT. COL. R. C. SPURLING, M.C.
Chief of Neuro-Surgery Section
Army Medical Center
Walter Reed Hospital
Washington, D. C.

COL. LEONARD G. ROWNTREE
National Chief of Medical Division
Selective Service System
Washington, D. C

COL. LEWIS SANDERS
Chief of Re-employment Division
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Washington, D. C.

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Navy Department
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Washington, D. C

DR. ROBERT MERILL, *Comdr.-in-Chief*
Veterans of Foreign Wars

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Army Medical School
Washington, D. C.

DR. PHILIP WILSON, *Medical Director*
American Hospital in Great Britain
New York, New York

CAPT. R. HAYDEN, M.C , U S Navy
Commandant, Third Naval District
New York, New York

LT. COMDR. JOHN B. HARTZEL, M.C., V. (S).
United States Naval Reserve
Oakland, California

CAPT. W. M. CRAIG, M.C., U.S. Navy
United States Naval Hospital
Bethesda, Maryland

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Philadelphia, Penna.

DR. CHARLES M. GRIFFITH, *Medical Director*
Veterans Administration
Washington, D. C.

COL. RAYMOND BLISS, M.C.
Surgeon First Army
Governor's Island

DR. WILLIAM CARPENTER MacCARTY
Mayo Clinic
Rochester, Minnesota

DR. WILLIAM D. RYAN, *Chairman*
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(Tentative)

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United States Navy
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A *special delegation from Mexico* will give a *symposium on War Surgery. Delegates, representatives and speakers from the following Latin Countries are expected to attend*:

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ARGENTINE
PERU
HONDURAS
BAHAMAS
BRAZIL
HAITI
COLUMBIA
CUBA
COSTA RICA
PANAMA
BOLIVIA
ECUADOR
PARAGUAY
URUGUAY

ENGLAND, RUSSIA, TURKEY, PALESTINE AND OTHER COUNTRIES

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Waldorf-Astoria Hotel
New York, N. Y.

CONSTITUTION AND BY-LAWS OF THE UNITED STATES CHAPTER

(Continued from page 166)

3. A District Credential Committee composed of three fellows shall be appointed by the President of the Guilds of each of the districts to pass on the general moral, ethical and professional qualifications of all applicants for membership. The Chairman of this committee shall render a report on the candidates to the Board of Examiners prior to the giving of the technical examinations to the applicant. Their term of office shall run concurrently with that of the District Guild Presidents.

This committee may be secret if the President of the Guild so desires.

ARTICLE XIV.

Post Graduate Educational Guilds.

1. Regents, Fellows and Members, and Associate Members in each district shall be organized as a Study Guild.

2. All the study guilds shall be under the jurisdiction of the Board of Governors which is itself answerable to the Executive Council and its President.

3. *The study guild in each district shall elect its own* officers.

4. The educational activities of the study guilds shall consist of:

   A. Clinical Teachings.
   B. Postgraduate Courses.

5. *Clinical Teachings* shall consist of operative demonstrations accompanied with clinical didactic discussions bearing on the cases under operation.

6. *Round-table Discussions* in which free general participation shall be encouraged.

7. *Dry Clinics* shall be held.

8. Postgraduate Courses shall be organized and given at designated teaching centers. Special courses of Regional Surgical Anatomy on the cadaver shall form a very important feature of the educational program, as well as courses in animal surgery.

These courses shall be given by a competent anato- [illegible]

10. Special courses in allied branches such as bacteriology, anesthesia, genito-urinary cystoscopy and catheterism, etc., shall complete the curriculum.

11. The frequency of these guilds teachings shall be left to the discretion of the Board of Governors.

12. The Board of Governors shall be empowered to *require moderate fees from the attendants for defraying* expenses.

13. Attendance at these post-graduate teachings shall be made obligatory.

14. The choice of the best methods of carrying out the post-graduate teachings shall be left to the discretion of the Board of Governors.

15. The Secretary-Treasurer of the Guild shall render a detailed financial report to the National Business Secretary, January first and July first of each year.

ARTICLE XV.

Auditing and Appropriation Committee.

1. The President shall appoint an Auditing and Appropriation Committee of three members chosen from the Executive Council, who shall serve for a term of two years, subject to re-election.

2. This Auditing and Appropriation Committee shall prescribe the method of accounting to be used for all accounts of the Chapter.

3. This Committee shall scrutinize all expenditures *of the Chapter and shall submit a report every three* months to the Executive Council on the financial conditions of the Chapter.

4. After conference with the President of the Chapter, it shall prepare and present annually to the President a *budget* providing funds for the contemplated expenses of the Chapter for the ensuing year.

5. Any unused surplus of funds for a given term of two years shall be placed in a sinking fund which is under supervision of the Board of Trustees.

Salaries.

1. The salaries of all employees and officers shall be fixed by the Executive Council and shall be paid by the Treasurer.

ARTICLE XVI.

Vacancies.

1. The Executive Council, through its President, shall fill by appointment all vacancies occurring in the interval between annual meetings.

2. The appointee shall serve until the successor has been elected and qualified.

ARTICLE XVII.

Upon the adoption of these By-Laws all previous By-Laws are hereby repealed and declared *null* and *void.*

(Continued from page 166)

statement [illegible]
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Constituti [illegible]
said mem [illegible]
Trustees [illegible]
Organizat [illegible]
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the Cons [illegible]
ARTICL [illegible]
new Para [illegible]
secede or withdraw from the International body or shall incorporate separately, or shall attempt so to secede, withdraw or incorporate, all of its funds and all other property shall thereupon be and become the property of the International body and shall forthwith be surrendered to it; and the Charter of such Chapter shall thereupon be revoked." ARTICLE XI of the By-Laws shall be amended by striking out the period (.) after the year 1935 and by placing a comma (,) in lieu thereof, and adding the following wording: "and as ratified by the International Meeting [illegible] 1938, and as
amer [illegible] York City,
N. Y. [illegible] York City,
N. [illegible] the Inter-
natio [illegible] 11, and the
Unit [illegible] Any legal
disputes that may arise between various chapters and the Central Organization shall be adjudicated in Washington, D C.

Paragraph 2 of Article [illegible]
to read as follows: "The [illegible]
consist of all the members o [illegible]
geons in good standing." [illegible]
Constitution is amended to [illegible]
Delgates shall hold its regular [illegible] during [illegible]
International General [illegible] College
stitute the Supreme Legis [illegible] the Col [illegible]

HONOR ROLL

DEDICATED TO THE FOLLOWING MEMBERS OF THE INTERNATIONAL COLLEGE OF SURGEONS NOW SERVING IN THE ARMED FORCES OF OUR COUNTRY

MEDICAL CORPS—ARMY

W. D. Anthony	Lieutenant	Gallup, N. M.
C. H. Arnold	Major	Lincoln, Neb.
W. A. Baird	Captain	Toledo, Ohio
W. N. Baker	Lieutenant	Denver, Colorado
E. V. Benbow	Major	Winston-Salem, N. C.
M. Berlind	Major	Jackson Heights, N. Y.
J. W. Bowers	Lt. Colonel	Fort Wayne, Ind.
N. A. Brethouwer	Captain	Montrose, Colo.
W. C. Burket	Major	Evanston, Ill.
W. J. Carrington	Lt. Colonel	Atlantic City, N. J.
D. C. Collins	Lt. Colonel	Beverly Hills, Calif.
. A. Conrad	Major	Elkins, W. Va.
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R. L. Hamilton	Major	Marysville, Calif.
E. G. Hardenbrook	Captain	Rochester, N. Y.
*L. D. Harris		Poughkeepsie, N. Y.
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M. F. White	Lt. Commander	Philadelphia, Penn.

*Rank unknown to editor; kindly notify.

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Bio-Physiological Considerations in the Treatment of Sub-Capital Fractures of the Hip*

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THE treatment of sub-capital fractures of the neck of the femur is a specially difficult problem, differing from that of all other fractures. It is the most unfavorable of all fractures as to union, so unfavorable that the title of an oration on this fracture before a recent Congress of The American College of Surgeons was designated "the unsolved fracture."

Sir Astley Cooper went on record 100 years ago with the statement that he had never seen a fracture of the neck of the femur that had united; nevertheless, the profession in general has not, as yet, advanced materially in its concept of the fundamental requirements in the treatment of these fractures or the physiobiologic considerations involved.

The British Fracture Commission has reported 22 per cent union in all types of treatment of central femoral neck fractures. In 1929 and 1930, a Committee of the American Orthopedic Association studied this problem and found from a general survey throughout the country that certain clinics had obtained unions as low as 30 per cent.

Two hospitals in New York have recently announced statistics showing 38 per cent union, while a third hospital reported 48 per cent. A consideration of the greatest importance is that all three hospitals reported 20 per cent aseptic necrosis of the femoral head [illegible] tho[illegible] cases which came to [illegible] stimulated osteoa[illegible] and mushrooming, accompanied by symptoms so acute that in most cases arthrodesis of the joint was necessitated. When union is effected, a mechanical means *alone being employed*, the question is still unsettled as to whether the blood supply to the capital fragment is sufficient to avoid aseptic necrosis.

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*Presented at the Third International Assembly of the International College of Surgeons held in Mexico City, August, 1941.

It would be difficult today to catalogue the numerous types of treatment recommended for fractures of the hip. From Sir Astley Cooper's time to the present, all of the many varieties of treatment have been based upon mechanical replacement and fixation alone, without consideration for the bio-physiologic requirements of the problem. These meth[illegible] treatment may be classified under [illegible] headings: (1) the conservative, or [illegible]n-operative, with no internal fixative agent, and (2) the operative, with some internal fixation. In the former classifica-

tenance of the fragments in position were all that was required. I have contended[1] that this was not all, but that there were other factors entering into this particular fracture problem. The capsule of the hip joint is attached to the neck of the femur obliquely and close to the base of the neck; therefore, a subcapital or central fracture of the neck of the femur is completely intraarticular. If it is completely intraarticular, then all possible sources of blood supply coming to the head fragment from the trochanter region of the femur or distal to the joint are cut off by a sub-capital fracture; the only blood supply is through the ligamentum teres. The question then arises as to whether the ligamentum teres, when not torn, does in all instances provide an adequate source of blood supply or tissue continuity for a circulation in which to develop. Wolcott attempted to evaluate tion of the ligamentum teres at the time of the operation and it was found that in 444 of these cases, the continuity of the ligamentum teres had been previously destroyed and also that there was not the slightest evidence of bleeding at the cotyloid notch, where the ligamentum teres is inserted into the acetabulum. In over 70 per cent of the cases, all ligamentum teres tissue appeared to have been evulsed from the cotyloid notch. In the remaining cases tabs of ligamentous tissue were found attached to the cotyloid notch of the acetabulum and fovea of the head of the femur or both. In three cases, the ligamentum teres was found intact and it was found necessary in all of these to sever the ligament before the femoral head could be removed. Free bleeding was observed at the cut end of its proximal portion. In one of these the fracture was found to be at the center of the neck and due to a rifle bullet which was discovered at operation, between the ununited fragments. The thought occurs to one in this case that inasmuch as the neck of the femur was severed by a bullet, it may have produced a shock sufficient in intensity at the time of severing to result in muscle flaccidity, and because of this, muscle spasm incident to the usual fracture did not occur and force the distal fragment of the femur upward, thus rotating the head in the acetabulum upward on the outside and the fovea of the head downward on the inside, to such a degree as to tear or evulse the ligamentum teres. This assumption is strengthened by the fact that the hip capsule is loose and alone determines the extremes of motion of the joint when the bony framework of the joint is intact and would not interfere with this degree of rotation of the femoral head fragment.

It is believed that the rotation of the head which tears the ligamentum teres is brought about by the concerted spasmodic contraction of two powerful groups of muscles as the abductors of the hip pull mesially upon their osseous insertion (the great trochanter) holding the fracture surfaces of both capital and distal fracture fragments together somewhat like the cogs of cog-wheels. The more powerful muscles of the thigh force the distal femoral fragment upward, thus rotating the fracture end of the spherical capital fragment upward and the fovea side of this head fragment downward, in this way tearing or evulsing the ligamentum teres.

The displacing influence of the same forces which produced the fracture may also aid in this phenomenon and then the very weak ligamentum teres gives way.

Dr. Gwilym G. Davis (2) may be quoted in this connection. "The ligamentum teres is composed of synovial and connective tissue. It is not strong and ruptures at about 14 kilos (30 pounds): the small artery it contains affords nourishment for itself alone, only a very small amount of blood going to the head of the femur. Bland Sutton regards it as a vestigial structure and a regression of the pectineus muscle. It is too weak to add much to the strength of the joint, and the view of Allis that its function is to distribute the synovial fluid and act as a lubricating agent is probably correct. The great pressure to which the articular surfaces of the hip-joint are subjected requires special lubrication and this is furnished by the ligamentum teres and Haversian gland."

From these studies, it is deduced that in the 447 cases of sub-capital fracture, the weak ligamentum teres was destroyed by torsion rotation or avulsion incident to the explosive displacement at the time of fracture. After many months, or, as is often the case, many years, it is difficult to deduce accurately the circumstances associated with the destruction of the ligamentum teres, or the precise place where it gave way. Varying degrees of fibrous adhesions to the periphery of the head are sometimes found, but when severed in removing the head, they have rarely been found to bleed to any appreciable extent, thus indicating that an adequate source of blood supply has not reached the capital fragment via this route.

If the ligamentum teres has not been ruptured, its continuity should serve to conduct induced collateral blood circulation of uncertain amount to the capital fragment, even if, anatomically, the blood vessels were very meager.

It is my firm belief that in those cases coming to nonunion, the destruction of the ligamentum teres at the time of the fracture is the important determining factor in the prevention of union. In other words, one is justified in coming to the conclusion that when the ligamentum teres is destroyed, the capital fragment becomes practically a joint mouse. Because of the intervening joint cavity, no collateral blood supply can come to it as in the case of other fractures from adherent overlying muscles or soft parts, and also as an added obstacle to union, the synovial fluid extending between the fracture surfaces of the femoral fragments completely bathing these surfaces. This must act as a real barrier preventing granulation tissue or callus extending from one fracture surface to the other, thus influencing inhibition of the very beginning of the attempted union.

It can be further deduced that it is only in central or sub-capital fractures that the mechanics are such that the spherical shaped capital fragment is permitted to rotate under the superior edge or roof of the acetabulum. When primary impaction occurs, there can be no rotation or twisting of the head; therefore, the ligamentum teres does not become torn or evulsed. This undoubtedly is one of the principal reasons, if not the determining reason, why such fractures are much more favorable to union. By the same token, it does not follow that secondary artificial impaction by the surgeon is of the same value because rupture of the ligamentum teres and surrounding periosseous soft structures may have already taken place by the primary rotation of the head fragment. When the fracture occurs further out in the neck of the femur, especially when it is transtrochanteric, the capital fragment is so long that it cannot become rotated under the rim of the acetabulum. Therefore, the ligamentum teres does not suffer. Also, if the fracture is so far out that it is partly or completely extra-articular, the adherent soft parts of the distal end of the capital fragment will prevent its rotation to such a degree as to rupture the ligamentum teres and they will also serve to convey blood vessels to the fracture junction of both fragments. There is thus a double reason for the statement so frequently made that transtrochanteric fractures always unite, whereas the prognosis is poor in sub-capital fractures treated by mechanical fixation alone.

Some years ago, the late Willis C. Campbell and I published statistics of results in two separate reports of the application of tibial bone-graft peg in ununited subcapital fractures of the neck of the femur, each showing better than 94 per cent of unions. The significance of these results is important, inasmuch as Campbell and I were dealing with cases in which the fundamental indications were the same as in fresh fractures, but much more unfavorable (1) because they were pseudoarthroses; (2) the capital fragment had become practically a joint mouse and (3) the urge of primary repair had long ceased to exist.

By chance, through a fault of technic on my part in failing to approximate or impact the fragments in three of these cases, we were unexpectedly able to learn of the unusual potentiality in a situation in which under any other type of treatment it would have meant failure. The hiatus between the fragments in these cases varied in extent from one-half to two-thirds of an inch and was spanned within the joint by the bonepeg alone. Post-operative X-ray studies of these cases made periodically showed that the peg constantly increased in size to the degree that it finally filled in the hiatus completely. This occurred in spite of the fact that the fragments were separated and the peg situated in the joint cavity surrounded by synovial fluid, blood vessels extending through it from the trochanter fragment to the capital fragment, the peg by its inherent osteogenesis having filled this space between the fragments with resultant union. The importance of this observation is self-evident as showing the potentiality of the bone-graft under most unfavorable conditions. It might well be asked what would have happened had a metal agent been used? In this respect, however, it should be commented that in many instances in varying environments, the author has observed that a graft has filled in spaces many times more extensive than in the cases cited, even as to as much as sixteen times the dimension of the hiatus in any one of the cases, the only difference being that the longer grafts were surrounded by vascular conducting soft tissues instead of spanning a joint space filled with synovial fluid.

Bone, being a supportive and relatively undifferentiated tissue, is able to suffer the absence of its blood supply for a considerable time without adverse effects; because of this, among other reasons, it is extremely favorable for transplantation. The rapid and profuse vascularization of a bone-graft is one of the most striking features encountered. When a portion of the complete diameter of a long skeletal bone has been replaced by massive grafts of much smaller diameter, the whole shaft will be restored not only to its complete diameter and strength, but will also develop a completely vascularized marrow cavity. The same phenomenon occurs in the use of a bone-graft as a terminal structure, such as in building digits where a tibial bone-graft is inserted into a tubular skin graft to restore a finger or thumb, which the author has successfully done many times. In this instance, there is a physio-biologic demand for blood at the distal end of this bone-graft and in response, a collateral circulation is developed throughout the whole length of the graft to the extent of a marrow cavity with its incident blood vessels. The analogy is identical to that of the peg graft conveying blood to the anemic femoral head from the very vascular cancellous tissue of the trochanter. These characteristics, as well as the osteogenetic capacity of the autogenous bone-graft peg, together with its mechanical strength, determines it to be the ideal means of treatment in operable cases of both fresh and ununited fractures of the central intraarticular portion of the neck of the femur. It is the only answer to the tripod of necessity in the treatment of such fractures, for it first furnishes efficient immobilization and, secondly, a living scaffold for conveying vascularization to the anemic head fragment, and thirdly, it brings an osteogenetic, callus-forming influence to the fracture junction.

To show the unusual vascularization capability of a bone-graft, Sir Arthur Keith, the famous practical pathologist of England, has prepared at the Museum of the Royal College of Surgeons in London, an extensive number of specimens. These specimens are prepared and injected and show the early and profuse vascularization of bone-grafts when used for a variety of purposes. In restoring extensive lost portions of shafts of bone and in a multitude of other uses, as well as in animal research, my own experience has in every instance confirmed Sir Arthur Keith's findings.

It is, however, of great importance in cases where other types of treatment have been employed, especially the various kinds of metal fixation agents for the surgeon to be eternally vigilant in watching for the earliest evidence of the beginning of nonunion. If there should be any change of position in relation to fragment, or failure of callus formation or absorption of bone around the metal, even of the slightest degree, as shown in good X-rays, this is evidence that union is not taking place. Very soon proof will follow with bone absorption at the neck of the fracture junction, indicating that there is an inadequate blood supply and that the ligamentum teres has been ruptured or destroyed by rotation of the head at the time of the fracture. Under such conditions, if bone absorption is to be avoided and union is to be secured, immediate action is urgent. With the fragments in good position, a bone-graft peg of at least one-half inch diameter should be inserted immediately.

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SUMMARY

Sub-capital fractures of the head of the femur are the most unfavorable fractures for union. Reduction and maintenance of the fragments in position are not enough to ensure union. As the only blood supply coming to the femoral head fragment is through the ligamentum teres, when the ligament is torn, as it often is, the blood supply is cut off. The various factors which induce tearing of the ligament are discussed at length. The ligament is not very strong; its principal function probably is to distribute the synovial fluid which acts as a lubricating agent in the joint.

In non-union, the destruction of the ligamentum teres is the determining factor. The absence of a collateral blood supply acts as a real barrier, preventing granulation tissue or callus extending from one fractured surface to the other. In primary impaction, the ligament is not torn; hence these fractures are much more favorable to union.

The author stresses the results in the application of tibial bone-graft peg in ununited sub-capital fracture of the femur neck; these are very good, better than 94 per cent of unions. By its inherent osteogenesis, the bone-peg fills the space between the fragments, and union results. Bone-graft vascularizes rapidly and profusely and is, therefore, the ideal means of treatment in both fresh and ununited fractures of the neck of the femur. The surgeon should be on guard for the earliest evidences of non-union. With the fragments in good position a bone-graft-peg of at least one-half inch diameter should be inserted immediately.

SUMARIO

Fracturas de la cabeza del hueso-femoris en la cadera (intra-capsular) son las más difíciles para obtener la unión. La reducción y fixación de los fragmentos en posición correcta no es suficiente para asegurar la unión. Como la única vía arterial de nutrición es por medio del ligamento teres. en caso de

ruptura del ligamento, que occurre con frequencia, la nutrición del fragmento cabezero está cortado. Los factores que causan la ruptura del ligamento teres son discutidos en detalle. El ligamento no es fuerte, su función principal es probablemente la distribución del flúido sinovial y la lubricación de la juntura. En caso que no existe la unión, la destrucción del ligamento teres es el factor que determina el resultado.

La ausencia de una circulación colateral constituye el obstáculo principal, impidiendo la formación de tejido cicatricial y osteogenético de un lado a otro de la linea de fractura. En fracturas impactadas de la cadera el ligamento teres queda intacto y por consiguiente más favorable a la unión. Los resultados de la aplicación de un injerto-oseo (clavija) del tibia en fracturas del femur intracapsular en la cadera, sin unión, son muy satisfactorias, con éxito de más de 94 por ciento de unión. La cualidad osteogenética inherente en el injerto-oseo llena el espacio entre los fragmentos que resulta en la unión. La clavija o injerto-oseo se vasculariza rapida y abundantemente y por consiguiente es el tratamiento ideal en ambos casos de fractura reciente y en fracturas en el cuello femoral, sin unión. El cirujano deberá alertarse de los primeros signos de falta de unión. Con los fragmentos en buena posición un injerto-oseo (clavija) por lo menos de una media pulgada de diámetro debiera ser insertado, sin pérdida de más tiempo.

RÉSUMÉ

Les fractures de la tête de fémur offrent un mauvais pronostic sous le rapport de consolidation. Il ne suffit pas de réduire la fracture et de maintenir les fragments en position pour assurer l'union. La tête de fémur reçoit son sang nourricier uniquement par l'intermédiaire du ligamentum teres; quand ce ligament est rupturé, ce qui est fréquent, tout apport de sang est supprimé. Les différents facteurs qui entraînent la rupture de ce ligament sont étudiés en détail. Le ligament n'est pas très solide; sa principale fonction est de distribuer la synovie et de remplir le rôle d'agent lubréfiant de l'articulation. Quant il y a absence d'union de facteur causatif est la destruction du ligamentum teres. L'absence de circulation collatérale empêche le tissue de granulation vu le cal de se propager d'une surface fracturée à l'autre. Dans les cas d'enclavement des fragments le ligament n'est pas déchiré et dans ces pronostic est moins défavorable.

Выводы

Переломы бедряной кости, как правило, плохо заживают. Вытягивание осколков и фиксации еще не гарантируют союз. В виду того, что головка бедряной кости снабжается кровью чрез лигаментум терес, перерыв этой связки лишает осколка его кровоснабжения. Эта связка не особенно крепка, ее главная функция это снабжать сочленение синовиальной жидкостью. Перерыв этой связки и представляет собой главную причину не заживания. Отсутсвие колятерального кровоснабжения мешает развитию гранюломной ткани и новой кости. При первичном окалачивании (импакции) осколков связка не разрушается и поэтому также переломы хорошо заживают.

Трансплантат из большеберцовой кости дает наилучшие результаты в незаживающих переломов шейки бедряной кости, свыше 94 процентов. Костяной метод плантет (графт) быстро васкулизируется. Он представляет собою идеальный метод лечения как свежих так и старых переломов шейки бедреной кости. Хирург должен цледить за ходом лечения и уметь угадывать самые ранние признаки не заживания. При правильной позиции осколков нужно немедленно наложить графт толщиной не меньше чем в пол вершка.

Surgery of Diabetes Mellitus*

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AFTER twenty years, the use of insulin in the treatment of diabetes mellitus has produced no greater effect than to prolong life and make it more comfortable. The hope of curing diabetes or even of arresting the progressive development of incipient diabetes by early treatment with insulin, has been in vain. Insulin therapy has not influenced pancreatic secretion of insulin over and above the transitory effect produced by the hormonal substitute, and, surprisingly, the number of cases of diabetes mellitus has even increased since the discovery of insulin. Wilder, of the Mayo Clinic, noted that diabetes was uncommon before 1930, but now it is one of the most frequently encountered diseases. In order to explain this apparent paradox, different hypotheses, more or less acceptable, have been suggested, the details of which will not be discussed here.

The work of Minkowski remains fresh in the minds of many clinicians, but in spite of his classic experimental achievements, it has not been possible to obtain definite results by glandular inoculations. Allen performed extensive partial pancreatic surgery on dogs and noted at the end of a year that there was a pancreatic hyperplasia. However, this does not permit generalization in relation to the human organism; the diseased pancreas does not react in the same manner as the healthy pancreas. Of late years clinicians have come to believe that surgery may be used to solve the hitherto obscure and intricate medical problem of diabetes mellitus. Experimental and surgical achievements have strengthened this belief.

The object of this paper is to point out the possibilities afforded by surgical intervention on the sympathetic nervous system, particularly the medullosuprarenal parts in conditions of diabetes mellitus, and to evaluate the therapeutic benefits therefrom. It represents the culmination of a series of experimental studies made in collaboration with Doctor Francisco Fonseca in Mexico.

EFFECT OF SURGICAL INTERVENTION

In regard to treatment of diabetes mellitus by surgery, surgical effect must essentially depend upon the glycogen regulatory function of the splanchnic suprarenals. Its principal, therefore, depends upon the physiopathologic characteristics of the splanchnic nerves and their glandular neurohormonal correlations, the suprarenals being considered the center of the equilibrium affected by this action and the pivot of the neuroendocrine glandular interrelations. The unstable balance, indicated by the pathologic picture, once known, the surgical procedure is then outlined with the object of favorably reestablishing the equilibrium or modifying the unbalanced state.

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* Translated by Señora B. De Lecuona and Alfred E. Gebhart, M.D., F.I.C.S.

The objective is to limit or suppress the suprarenal glandular function, without suppressing the bilateral glandular system, as that would not be consistent with life. Agreeing with this, and also with the indications for surgical intervention, preference should be given to suprarenal juxtaglandular enervation, conceived by Ciminata and originally perfected by Donati, and to the subdiaphragmatic extraperitoneal splanchnicectomy, exactly as recommended by Pende. The manner of extraperitoneal lumbar approach of both technics permits an easy combination, if such should be desired. Likewise, we can utilize as a preoperative functional exploration, to serve as indicator of what may be anticipated with some exactitude from the intervention, the functional splanchnic alcoholization, as suggested by Alessandri and Valdoni. Alcoholization is done generally from the left, level with the XI dorsal vertebra, affecting the large and small splanchnic, the thoracic spinal ganglions of the VI and XI dorsal vertebrae, the internal and external communicating branches that separate them, and one or two intercostal nerves, in fact, of the entire thoracic sympathetic system.

The surgical interventions to which I have referred have purely functional merit; their action is exerted upon the neuroglandular suprarenal equilibrium.

PHYSIOPATHOLOGIC SOURCES

The remarkable experiments of Claude Bernard, producing hyperglycemia and glycosuria by puncturing the fourth ventricle, are well known. Kahn, Blum, Eppinger, Erlandsen, Falta, Herzberg, Richards, Runddinger and Vosburgh have demonstrated that an excess of adrenalin tends to produce hyperglycemia, while ligature of the suprarenal veins causes hypoglycemia. Kahn, Mayer and Tscheboksaroff have demonstrated in like manner that the effects under discussion follow the course of the splanchnus, since ventricular puncture remains ineffective if the aforementioned nervous paths have been previously interrupted. Geiger and Szirtes have noted an appreciable increase of hypoglycemic action of atropine, following division of the splanchnic nerves.

Boggico, David, Frouin, Mayer and Zuelzer, experimenting with ligature of the suprarenal veins of depancreatized animals, have deduced that bilateral suprarenal enervation produces a hypoglycemic reaction. Ciminata first attempted systematic investigation of glycemic modifications subsequent to suprarenal enervation, experimenting in the laboratory upon animals hyperglycemized through faradic stimulation of the sciatic nerve. These animals, after bilateral enervation in consecutive periods, survived for a considerable length of time, showing a decrease in the induced hyperglycemia. Takats showed, lastly, that a notable increase in the tolerance of hydrocarbons follows bilateral suprarenal enervation or unilateral enervation with splanchnicectomy and with opposite lateral suprarenalectomy, and he noted that this tolerance reached its height at six months and continued even after a year. Bianchi and Moretti showed in further studies that the glycemic cipher in some diabetics may be reduced with ergotamine.

Glycogen regulation is found to be governed by a double physiological mechanism that is antagonistic and interactive, that is, the vagopancreatic junction represents a system of hypoglycemic action while the splanchnicosuprarenal junction constitutes a system of hyperglycemic coordination. Interruption of the union of the nerves through suprarenal enervation, although treated by splanchnicectomy or juxtaglandular enervation, destroys the equilibrium of the two antagonistic systems and produces as a result: (a) rupture of the vagopancreatic splanchnic suprarenal, followed by hypoglycemia; (b) conspicuous and lasting hypoglycemia through hypoadrenalinemia; (c) greater toleration of the hydrocarbons. Thus, besides the therapeutic importance that the suprarenal enervation has for pancreatic diabetes, whether operating on the periglandular nervous plexus or on the splanchnic course, or upon both at once, if the hyperglycemia is lowered through the decrease in adrenalin, there is a tendency to balance the insufficient pancreatic insulin with beneficial modifications in the disturbed metabolism of the hydrocarbons.

We have approached the problem of diabetes mellitus according to the following method: (1) functional splanchnic division through alcoholization in normal individuals, with the object of ascertaining the corresponding modifications in glycemia; (2) functional splanchnic division through alcoholization in pancreatic diabetes, with the object of evaluating the effects upon the hyperglycemia and the glycosuria and likewise as a functional preoperative exploration in such case; (3) surgical intervention in pancreatic diabetes in those upon whom the operation is advised, following preoperative functional exploration.

GLYCEMIC CURVES IN NORMAL CASES

Fifty observations were made upon adults: in twenty cases the quantity of glycine was ascertained immediately before the splanchnic block, in order to know the normal cipher of control and after alcoholization was accomplished. After fifteen minutes, after three hours, on the following day, after two days and afterward every three days, until the glycemia became approximate to that obtained immediately before alcoholization, the quantity of glycine was determined. The remaining determinations were made immediately before the alcoholization, and afterward every five days until it was noted that the glycemia was approximate to that obtained before the alcoholization. The following was noted: After fifteen minutes there was a marked glycemic decrease of 24 to 32 mg. per 100 c.c.; after three hours, hypoglycemia somewhat more or less than the preceding; the next day, marked hyperglycemia, .0 to 160 mg. per 100 c.c., an increase that may continue with slight variations for twenty-four hours. After two days one may still note hyperglycemia, which at times may be extraordinarily low—26, 28, 34, 40 mg. per 100 c.c., sometimes continuing very low for three days and after five days, glycemia becomes the lowest; near the end of the first week, hypoglycemia is approximately 20 to 25 per cent lower than the normal of controls. The hypoglycemia that is established at the beginning of the second week continues with slight variations for the entire period of splanchnic block, with a tendency to disappear accordingly as the splanchnic block lasts or to reappear as the splanchnic function reestablishes itself. The hypoglycemia lasts from three to six weeks but we have observed four cases where it lasted two months.

GLYCEMIC CURVE IN DIABETES

In eighteen cases of pancreatic diabetes, we performed functional splanchnic division through alcoholization. The degree of glycemia was ascertained before the splanchnic block, in order to know the pathologic cipher of control and was continued every five days in ten cases and each week in the remainder, until the glycemia showed higher numbers as revealed by the denominator; in three cases determinations of glycosuria were made at the exact time of those of glycemia. The patients were instructed from the moment of alcoholization to ignore the anti-diabetic diet and to eat normal food, immediately cutting the insulin and all medical treatments, with the exception of three cases, in which antileutic therapy was continued because of syphilitic infection.

The results obtained from this study were:

1. Hypercemia decreases a little at the end of the first week and rises definitely, proving this is not a pancreatic diabetes and nothing is to be hoped for through surgery.
2. The hyperglycemia remains the same for one or two weeks, then disappears suddenly and normal glycemia is noted.
3. The hyperglycemia remains the same for one or two weeks, then disappears gradually and normal glycemia is noted in one or two weeks.
4. The hyperglycemia disappears, the glycemia returns to normal, or one observes a slight hypoglycemia at the end of the first week, but notes also, a continuation of transitory hyperglycemia, at times slightly greater than had existed, which disappears in turn, with normal glycemia or slight hypoglycemia at the end of the second week.
5. The effect of splanchnic block through alcoholization was that three to six weeks time elapsed between the disappearance and the return of the hyperglycemia, a period of time similar to that of hypoglycemia after alcoholization of normal individuals.

Nevertheless, the glycosuria is not always related to the glycemic index. Three cases in which the glycosuria was studied in relation to the glycemia are illustrative in this respect.

1. The glycosuria increased before the decrease of hyperglycemia began in the case of F. C., aged 36. This patient had a hyperglycemia of 220 mg. per 100 c.c. and glycosuria of 50 gm. per 1000 c.c., and later 220 mg. of hyperglycemia and 71.4 gm. of glycosuria.
2. The glycosuria increased with the descent of the hyperglycemia in J. H., aged 39, with a hyperglycemia of 300 mg. per 100 c.c. and glycosuria of 66 gm. per 1000 c.c., and on continuation 214 mg. of hyperglycemia and 100 gm. of glycosuria.
3. The degree of glycosuria was 8 to 36 gm. per 1000 c.c., at the same time that glycemia ciphers were 75 to 125 mg. per 100 c.c., in M. R., aged 58, diabetic insulin-resistant patient of long standing. Therefore, without losing sight of the great importance of the glycemic ciphers in comparison with the glycosuria, the paradoxical increase of this could perhaps be explained by taking into account essentially renal factors: (a) the renal nerves, for the greater part from the celiac plexus (you are reminded of their correlation with the large splanchnic), of the small splanchnic, and of the changeable lesser splanchnic, lower or abdominal; (b) the renal nerves are principally vasomotor, in part, motor and secretory.

The clinical improvement of the patients has been shown. The weight, decreased at times as much as a kilogram (2-1/5 lbs.) during the first week, registered an increase of half a kilogram to three kilograms in a month over the initial ciphers. The working capacity always increased immediately following the splanchnic block, the asthenic block, the ambliopia, and the drowsiness disappeared. The old cardinal symptoms moderated, the appetite became almost normal, with little thirst and less urination. The gangrenous or suppurative processes in this case were rapidly influenced from the first moment toward a cure. Two patients with gangrene of the foot: A. R., aged 17 and B. G., aged 39, previously mentioned, with an abcess of the mammary gland following three days after splanchnic block, changed specifically in spite of the fact that J. H. showed hyperglycemia of 300 mg. per 100 c.c. and glycosuria of 66 gm. per 1000 c.c., just at the moment of the widening. The rapid healing of these lesions indicates clearly the urgency for surgery in pancreatic diabetic patients.

OPERATIVE RESULTS

In virtue of the fact that our experience is still insufficient and limited in operative results, I do not consider myself yet authorized to give definite conclusions. Nevertheless, our few statistics, recently submitted to the Mexican Academy of Surgery, give some hopeful promise, in spite of the short time of observation. I will mention two illustrative cases.

J. H., aged 39, with a hyperglycemia of 288 r. per 100 c.c., and glycosuria of 56 gm. per 00 c.c. at the end of the first week after left prarenal juxtaglandular enervation was performed, had a glycemia of 125 mg. per 100 c.c. and no glycosuria. In two months there was a glycemic fluctuation of 125 to 176 mg. per 100 c.c. The glycosuria reappeared after the first month, at times no more than 6 gm. per 1000 c.c. During eight months, at the end of which the observation was discontinued, there followed alternatively periods of almost normal glycemia and glycosuria, with notable improvement of the symptomatology, good toleration of hydrocarbons, and increase of six kilogrammes of weight in eight months.

C. T., aged 27, insulin resistant, with a hyperglycemia of 310 mg. per 100 c.c. glycosuria of 32 gm. per 1000 c.c., following redivision of the large splanchnic and of the small splanchnic and left juxtaglandular suprarenal enervation, showed immediate, noticeable improvement of the symptomatology. At the end of the first week, the glycemia decreased to 75 mg. per 100 c.c. and the glycosuria disappeared. Observation was continued for six months, the glycemia fluctuating from 114 to 136 mg. per 100 c.c., with reappearances at times of the glycosuria, not greater than three gm. per 1000 c.c. There was good toleration of the hydrocarbons, and an increase of four and a half kilogrammes in weight in six months.

In addition to our two cases I wish to mention the earlier classic cases of Donati, of Corachan and Simarro, of Schmidt, the three interesting ones of Giordano and those of Crile. I agree with Ciminata that the first suprarenal juxtaglandular enervation, as practiced by Donati, is an example of what one can expect from this form of surgery. His patient, a woman gravely ill with diabetes mellitus, who following the operation showed absence of post-operative hyperglycemia and noticeable diminishing of the hyperglycemia, the glycosuria and the pollakiuria remained in a satisfactory condition during a period of three years, at the end of which the glycosuria reappeared but was controlled by very small doses of insulin.

Neurohormonal surgery gives one confidence in the surgical treatment of diabetes mellitus. Neurohormonal surgery in this, as in other pathological conditions, for the greater part considered as incurable, may now be extended to the treatment of diabetes mellitus.

Observations here recorded, for the greater part, have been made in the General Hospital of Mexico and in my private practice.*

SUMMARY

In the surgical treatment of diabetes mellitus, preference is given to the juxtaglandular *suprarenal enervation and* to subdiaphragmatic extraperitoneal splanchnicectomy, employing as a preoperative indicator, splanchnic functional division through alcoholization. Experimental studies were done as follows: (1) Functional splanchnic division through alcoholization in normal individuals, to determine resulting modifications in the glycemia; (2) splanchnic functional division through alcoholization in pancreatic diabetes, with the object of evaluating the effects on the hyperglycemia and glycosuria, and as a functional preoperative exploration; (3) surgical intervention in pancreatic diabetic individuals, in which the operative interference is advised through the preoperative functional exploration.

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* I wish to express my thanks to Dr. Maria Luisa Fernandez for her generous cooperation and to Drs. Gustavo Argil, Alfonso Castrejon, Gerardo Verela and Margarita Perrin for their kind assistance in the laboratory.

SOMMAIRE

Pour le traitement chirurgical du diabète sucré, l'auteur donne le préférence à l'énervation jutaglandulaire de la surrenale et à le splanchnicectomie sous-diaphragmatique extrapéritonéale. Il emploie comme indicateur préopératoire, la division fonctionnelle du splanchnique par alcoholisation.

Il proceda ainsi dans ses recherches expérimentales: (1) division splanchnique fonctionnelle par alcoholisation chez des sujets normaux afin de déterminer les modifications qui en résultent dans la glycémie; (2) division fonctionnelle splanchnique au moyen d'alcoholisation dans le diabète pancréatique, ayant pour but l'évaluation qui en résultent dans l'hyperglycémie et la glycosurie et comme exploration fonctionnelle préopératoire; (3) intervention chirurgicale chez des individus souffrant du diabète pancréatique dans lesquelles l'exploration fonctionnelle préopératoire indique le traitment opératoire.

SUMARIO

En el tratamiento quirúrgico de la diabetes mellitus se da preferencia a la enervación suprarrenal yuxtaglandular y a la esplancnisectomía extraperitoneal subdiafragmática, empleando como indice preoperatorio la división funcional esplancnica por la alcoholización. El siguiente estudio experimental se llevó a cabo: (1) División funcional esplancnica por la alcoholización en individuos normales para determinar su acción modificadora de la concentración de la glucosa de la sangre. (2) La acción de este procedimiento en casos de diabetes pancreática para determinar su efecto en la hyperglicemia y la glucosuria y como método de exploración funcional preoperatorio. (3) La intervención quirúrgica en individuos con diabetes pancreática cuando ésta es indicada por los resultados obtenidos con la exploración funcional.

Выводы

При хирургическом лечении диабета предпочтение дается экстрарекальной инервации и субдиафрагмальной спланкнисектомии, причем в виде до-оперативного индекса автор прибегает к функциональному перерыву спланкникуса посредством алкоголизации.

В эксперименте следующее было сделанно: (1) Функциональный перерыв спланкникуса у нормальных индивидуумов, с целью проследить колебания в гликемии; (2) Та-же процедура и диабетиков с целью определить влияние на гипергликемию и глюкозурию; и (3) оперативная интервенция у диабетиков придерживаясь указаниям до-оперативной функциональной пробы.

The Prevention of Cancer of the Cervix*

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THE frequency of cancer in the cervix of the uterus calls for greater emphasis on its prevention. There is an extraordinary incidence among parous women as compared with nulliparas. In fact, Cameron considered childbearing the greatest predisposing factor to cancer of the cervix, with 97 per cent occurring in women who have borne children. He reasoned that there a relationship between frequent fertility and the incidence of the disease. However, he added that since cervicitis and lacerations occur principally in parous women, this may be a factor in the development of the malignancy. While obstetricians emphasize the importance of a check-up weeks after childbirth, there are many who do not heed this advice, and certain unhealthy conditions are permitted to run a course that may lead to dire results.

Curtis stated that the majority of gynecologists believe that traumatisms of childbirth, particularly lacerations with eversion and erosion of the cervix, are important factors in the etiology of cancer of the cervix. Since a cervical stump presents more of a hazard than the average cervix, he believed that, on the basis of our present knowledge, an unhealthy cervix should certainly be removed at the time of hysterectomy, but removal of a healthy cervix should depend on the circumstances of each individual case. According to Curtis, obstructed uterine drainage is a factor in the development of carcinoma of the body of the uterus and of the cervix. In an article published in 1933 I mentioned certain experiments in which mammary cancer in mice was produced by ligating the gland ducts at the nipple, or by preventing the young from suckling, thereby *causing retention of breast secretions.* It would thus appear that prolonged stasis in any organ or gland may cause sufficient internal irritation to result in malignancy.

In a consideration of the prevention of cancer the question of chronic irritation —external or internal—cannot be too strongly stressed, this despite the fact that Graham argued that there is practically no evidence that chronic mechanical irritation is in *any* sense a causative force in the production of the disease. He contended that while carcinogenic agents — viruses, certain radiations, chemical carcinogens—may induce cancer, this action is through a specific irritation, and that the chimney sweep's cancer, for example, is due to the action of certain carcinogenic tars, and not to any mechanical or thermal irritation. All this is theoretical and at present its place is in the realm of the research laboratory, but for all practical purposes we can go forward on the basis that prolonged irritation of any kind, from within or from without, may produce malignancy.

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* Read at the 43d Annual Meeting of the American Therapeutic Society, Atlantic City, June 5, 1942.

Dr. James E. Davis, formerly of the University of Michigan, in a personal letter to me dated March 24, 1941, stated that "prolonged irritation and injury to tissue has both mechanical and biological effects. The primary tissue is destroyed and epithelial tissue is most susceptible. After all injuries, the biological obligation is to repair that which has been partially or wholly destroyed and the repair material always consists of newly produced cells which are never able to reach the maturity stage in a prevailing status of premalignancy. That this premalignant state is not necessarily contingent upon the presence of any one causative factor appears quite obvious. The sum total of all influences arrest growth of the immature cells, preventing their ever reaching normal maturity. Cell multiplication becomes permanently and excessively stimulated but the ripening or maturing factor is destroyed. This latter factor in cervical cancer may come from (a) old lacerations in which there are abnormal positions of the cells, (b) continued inflammatory stimulation, (c) lowered resistance because of faulty inheritance, imbalance of endocrines, imbalance of vitamins, or other as yet unknown factors."

Recently I visited the great Institute of Experimental Medicine of the University of Buenos Aires, and saw some of the outstanding work being done under the leadership of its Director, Prof. Angel H. Roffo. He has sixty full-time co-workers on his staff in this institute of five hundred beds. They had just reached their one hundred thousandth case of tumors and cancer. Roffo strongly agrees with the irritation theory of cancer production. He contends that strong sunlight, the smoking of tobacco with the heated nicotine passing through the cigar holder or directly from the cigarette or cigar onto the lip, are causes of cancer. In this experimental institute they believe that oil from the particles of dust floating in the city air causes lung cancer, and that certain foods may result in cancer by the irritation of the body cells through substances added to the blood and lymph. Extensive and painstaking animal experimental work on a large scale seems to confirm many of their claims.

In the prevention of cancer of the cervix, as at other sites of the body, all theories of causation must be considered. Some are yet in the experimental stage and it is for the future to decide their worth. The hormone theory may hold the answer to the cause and thus to the prevention of cancer. Gonzalez-Rincones of Venezuela, believes that normal growth is governed by a hormone, that at a given time another hormone retards further growth and that when the latter does not function properly growth becomes riotous and cancer may develop.

Many research centers are investigating the possibility of cancer being a deficiency disease and are studying the chemical values of foods and the amount of each that should be taken daily, to be augmented by concentrated medication when there seems to be a lack of certain chemicals. Some thoughtful workers in this line feel that the proper balance of the biochemistry of the body will result in the reduction of malignant growth. Time and further research may clarify many doubtful points, and work along these lines may result in much prevention of cancer.

But for the present and referring now specifically to the cervix uteri, the consensus of opinion among gynecologists is that the irritation caused by [illegible] states at this site lead in a [illegible] to malignancy. Novak st[illegible] secondary changes of lacerations of the cervix—infection of the cervical tissue and chronic cervicitis with eversion of the swollen mucous membrane and at times retention cysts and erosions—are important in the production of persistent leukorrhoea and in the possible dissemination of infection to other pelvic structures, and adds that they are commonly looked upon as predisposing to the development of cervical cancer.

Kennedy and Campbell used the term "abused cervix" to embrace lesions that follow any kind of trauma of the cervix together with conditions that may be infectious in origin, and often erroneously classified as erosions. These, they believed, show a neglect of cervical lesions that is reprehensible. They emphasized points with which we have all had to deal—patients with extensive laceration of the cervix return repeatedly for cauterization and other advice, but repair is ot done. A condition may exist during his period of cauterization which may be good soil for the growth of cancer. They stated that while the cautery is of definite benefit to the eroded cervix, it should never replace proper plastic repair of the cervix in conditions of cervical pathology where there is evidence of an extensive laceration with eversion of the cervical lips and erosion—a potential source of malignancy. They stated that many of these patients with "abused cervix", neglected for years, will die from malignancy if the uterus is not removed and that any attempt at repair will fail on account of the great amount of fibrous and scar tissue which prevents proper approximation of the cervical tissue.

Quite apart from any question of malignancy, Crossen and Crossen advocated that the improved method of handling pathological conditions about the cervix consists of effective treatment of chronic cervicitis with the obtaining of a specimen by excision of the entire area. Usually curettage of the endometrial cavity is also indicated to exclude malignancy in that region or to eliminate other endometrial pathology causing bleeding and discharge. This treatment removes the chronic cervicitis, the discharge, and the chronic irritation with the menace of cancer; it permits microscopic investigation of the affected tissue to settle the question of malignancy, and all doubt that may still exist after a negative result from the usual small specimen, is removed.

Cashman and Frank advised subtotal hysterectomy with cauterization of the cervix when benign conditions require removal of the uterus, because the end result is a noninfected smoothly healed cervix, and no subsequent surgical treatment of the cervical stump for inflammation or new growth was necessary in the series of cases they reported. They stated that the cervix is the principal source of postoperative infections after hysterectomy and advocated deep cauterization to sterilize the cervix immediately before the operation. This I believe is an important point and is a procedure I invariably follow.

Throughout my long experience as surgical director of a large hospital for the mentally sick, where patients can be kept under observation for many years, I have had an extensive number of cases with apparently simple ulcer or erosion of the cervix. These I have treated by *destruction of the mucous membrane* in and around the diseased area with chemical or thermic agents. Cancer has not developed in any of these cases. If they had been considered clinically as beginning malignancy, any method used would have been hailed by some as the great curative agent and the statistics of cancer cures would have been greatly swelled.

The late Bland Sutton of England, with thousands of hysterectomies to his credit, retained the shell of the cervical tissue in cases of uterine disease, benign or on the borderline, by a wedge-shaped removal from above, to aid the support of the pelvic floor. With the epithelial tissue removed in its entirety, he believed that he safeguarded against malignancy and the grave but lesser evil, distressing prolapsus. As a postgraduate student I had the privilege of seeing a great deal of his work and early adopted this method and have used it in a large number of cases with gratifying results.

We are in a quandary with regard to the reason for the development of cancer at many sites of the body, but in the cervix we can again and again point to a definite line that starts from cause and leads to effect. Inflammations, irritated scar tissue, lacerations, erosions, eversions, infections are all common cervical pathologic states that may cause cancer formation. Any eversion of the mucous membrane of the cervix, from its naturally alkaline secretion, into the normally acid secretioned vagina invites inflammation and organic trouble by the change in the environment of the cells. Thus a clear deduction is that the most direct manner in which to try to prevent cervical cancer is the immediate and thorough repair of all abnormalities in this region. It is of the utmost importance that careful examination be made of the pelvis of women, especially parous women, who may complain of an apparently slight disorder. Even in this day of enlightenment I have had women come to me who have been given advice merely on the basis of a description of their symptoms, without even a cursory examination on the part of the physician consulted. The prevention of cancer means first the detection of pathologic states, and then their immediate and proper treatment. It is particularly important to remove as much scar tissue as possible from a cervix before menopause sets in, for it is at this time that the change from benign to malignant is more likely to take place. A cervix repaired before the onset of the climacteric is a cervix that has been given an excellent chance to escape cancer.

It has been said that plastic repair of the cervix is a lost art. My personal observation confirms this statement. While cauterization is the correct and effective treatment in many instances, there are others, too often overlooked, in which repair is the only proper procedure. I have in mind a patient seen recently, a mother of two children, aged 49, with a badly lacerated cervix, who was treated by local applications for ulcer and erosion of this region periodically for five years. She was then taken to a hospital where an annular piece of tissue was removed from the cervix for microscopic examination. The pathological diagnosis was squamous cell carcinoma with superficial ulceration, marked chronic cellular and productive inflammation, and fibroglandular hyperplasia with cyst formation. It took five days for the report to be received—after the cancer had been cut into. Radium treatment was advised but on the insistence of relatives, the patient changed physicians. We removed the tubes, ovaries, uterus and entire cervix. The cancer had not yet attacked the fundus of the uterus or the broad ligaments but there was microscopic proof that in the granulation tissue removed during the Sturmdorf operation of the previous surgical procedure there remained malignant cells of epidermoid carcinoma.

This case is important from many angles. In the first place it is reprehensible that a woman in the menopausal age be permitted to go for five years with extensive scar, ulcer [illegible] erosion cervix, without an operation. In the second place, it is profoundly dangerous to cut into cancer and leave malignant cells *in situ* without every precaution being taken to prevent possible spread of the cancer cells. If there was any doubt whatever of the diagnosis a radical biopsy should have been done with cauterization of the diseased area before operating. There are some who say that even the immediate searing of the area *with the cautery is not sufficient, for one* cannot say at what split second the cells may escape into the surrounding tissue, so delicate is the matter of dissemination of cancer cells. Therefore, biopsy should be performed most cautiously, always with the thought in mind of the avenues of extension that must be blocked off. Too much emphasis cannot be placed on this point. In the third place, the length f time that was permitted to elapse om the removal of the tissue to the receipt of the pathological report, to the time of complete operation, might have spelt the death sentence for this unfortunate woman.

I desire to interject a note of warning here. In my practice I have observed examiners who, by their rough handling, have sometimes caused tissue trauma. An examiner who, with finger in vagina and hand on abdomen, pulls at the organs or palpates the abdomen roughly to determine if the ovaries or tubes are out of place is treading on dangerous ground and by this process, which is practically a massage of the area, can disseminate cancer cells, if they are present, to the surrounding area. If cancer is present, or there is an ulcer or erosion or cyst of the cervix, cauterization of the diseased area should be done as a precautionary measure before thorough bimanual examination is attempted.

During curettage operators may so forcibly pull down the cervix with the tenaculum that the tissue may be cut into and injury to the surface sustained. If this occurs through an area of erosion or ulceration the trauma may have serious results, and if cancer is already present the malignant cells are thus transplanted deep in the tissue. Since cancer starts in the epithelium it is highly dangerous to transplant the diseased epithelial tissue. This procedure may nullify the best surgical technic.

CONCLUSIONS

1. Hyperacidity of the body should always receive attention.
2. Periodic examination of the cervix of parous women should be regularly done, for it is in this group that one finds the extremely high percentage of cancer of the cervix.
3. Bimanual examination and curettage for microscopic study in any suspected case of uterine or cervical malignancy should be performed with great care and gentleness.
4. In examining, expose the cervix to view and grasp with the tenaculum forceps what seems to be the healthy, not the diseased area.
5. All scar tissue of the cervix should be removed as far as possible before the climacteric.
6. Any eversion of the mucous membrane of the cervix from its naturally alkaline secretion to the normally acid secretion of the vagina should be remedied, for the chemical change causes irritation. The epithelial cells as a rule, and not the scar *per se*, are the starting point of malignant change. The acid bath of the cells may be the irritation needed to start the malignant process.
7. If there is a recurrence of ulcer or erosion of the cervix, discontinue cauterization and resort to operation.
8. Scars, papillomata, cysts, erosions, ulcers, lacerations, and all like ab-

normal conditions should receive prompt and adequate treatment.

9. Chronic irritation, external and internal, should be guarded against at all times.
10. It should be borne in mind that the massage or forcible handling of a cancerous area may break down Nature's barriers and spread the disease. While cancer is not transplantable from man to man it can be transplanted in the same host. These points should be remembered when examining or operating on a patient with cancer or suspected cancer.

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RÉSUMÉ

L'inflammation, l'irritation de tout tissu cicatriciel, les lacérations, les érosions et les infections sont des états pathologiques du col de l'utérus qui fréquemment déterminent le cancer du cervix. Pour prévenir cet état funeste, il importe de corriger immédiatement et totalement toutes ces anormalités. Les éversions de la muqueuse du col et sa sécrétion alkaline est nuisible sécrétion acide vaginale. Ces éversions doivent être corrigées car cette altération chimique provoque une irritation et cette irritation peut entraîner l'éclosion d'un cancer. La réparation plastique du cervix est d'une importance primordiale. Quoique la cautérisation du col suffit et entraîne la guérison d'un grand nombre de cas, il existe des cas, surtout des cas d'ulcérations récidivantes, dans lesquelles il ne faut pas retarder les différents procédés opératoires appropriés aux indications chirurgicales. Il est bon toute manipulation violente d'une lésion de ne pas oublier que tout massage, que cancéreuse peut briser la barrière établie par la nature et amener l'extension de la malade. Gardons ceci à l'esprit quand nous examinons ou opérons une malade présentant des lésions qui suggèrent l'existence possible d'un cancer.

SUMARIO

Las inflamaciones crónicas, las laceraciones y erosiones, las eversiones, y las infecciones crónicas son estados patológicos comunes del cuello uterino que pueden favorecer el desarrollo del cáncer en este órgano. La reparación inmediata y completa de todas las abnormalidades de esta región es el método más directo para prevenir el cáncer, especialmente cuando se práctica antes de que se manifieste el climaterio.

La eversión de la mucosa del cuello uterino la somete a la acción irritante de las secreciones ácidas de la vagina que con el tiempo puede contribuir a precipitar el desarrollo del cáncer, por lo tanto es importante el remediar esta condición patológica.

Es importante el practicar la cirugía plástica del cuello uterino. Aunque la cauterización es efectiva en muchos casos, es preferible el no retardar la intervención quirúrgica en aquellos casos de úlceras recurrentes. Es de importancia el recordar siempre que el masage y la manipulación innecesaria de todo tejido canceroso puede romper las barreras naturales y así favorecer la propagación del cáncer, por lo tanto, es menester el proceder con cau [illegible] cuan [illegible] examina o se opera [illegible] probabilidades de [illegible]

Выводы

Воспаление, рубцы, разорванная ткань, эрозии и инфекции шейки матки представляют собою обыкновенные патологические состояния ведущие к злокачественному перерождению. Удаление этих условий наилучший метод предупреждения ракового процесса. Иверсия слизистой шейной оболочки и ее подвергание кислому секрету влагалища ведет к раздрежению, кторое, в свою очередь может служить главным фактором в злокачественном перерождении клеток.

Каутеризация, а при рекурентных язвах, оперативное вмешательство не нужно откладывать. Массаж и манипуляция злокачественной ткани может вести к нарушению нормальных барьеров и к распространению ракового процесса. Этого факта не нужно забывать при екзамене или операции пациентки с возможным раком.

FOURTH INTERNATIONAL ASSEMBLY

REGISTRATION

Begins Sunday, June 13, 1943 at 2:00 P.M.

Registration desk will be located in the Silver Corridor Room of the Waldorf-Astoria Hotel

All Delegates, Members of the Committees on Arrangements and all others in the City of New York are requested to register on that date

Everyone expecting to attend the Assembly must register.

Registration fee, $3.00

Men in uniform will not be charged a registration fee

Visiting ladies are also asked to register

HOUSE OF DELEGATES

of the International College of Surgeons and of the

UNITED STATES CHAPTER

will meet during the Assembly at the Waldorf-Astoria Hotel

For information see Bulletin Board in College Booth

CONVOCATION

See announcement Bulletin Board College Booth

Waldorf-Astoria Hotel, Tuesday, 5:00 P.M.

TECHNICAL & SCIENTIFIC EXHIBITS

Jade Room and Astor Gallery

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East Foyer

MOTION PICTURES

West Foyer

DINNER

Sert Room, Tuesday, June 15, 7:00 P.M.

(Dress optional)

Anisocoria in Chronic Appendicitis*

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MILWAUKEE, WISCONSIN

CHRONIC appendicitis is an entity that is often not readily diagnosed in spite of its numerous clinical symptoms.

Pain in the right lower quadrant of the abdomen on pressure, or rebound tenderness of the abdominal wall, can be due to various causes. The conditions commonly encountered are: disease of the right kidney, ureter, gall bladder, right adnexa, Meckel's diverticulum, or mesenteric lymph nodes; spinal nerves involved in an inflammatory process of the membranes covering them or mechanically compressed by bones of the vertebral column or the discs between them. Spondylitis is a condition to be borne in mind with its abscess formation following the course of the ilio-psoas muscle.

Muscular rigidity in the right lower quadrant is significant of a local peritoneal irritation. If confirmed by rectal examination in eliciting tenderness in the right cul-de-sac (Douglas), the inflammatory process is confined to organs in or close to this area.

Hyperesthesia of the skin (Head's Zone) due to irritation of sympathetic fibers of the vermiform process and sensory nerves of the skin entering the spinal cord at the same level, is not prevalent in chronic appendicitis.

X-ray study is only conclusive if a filling of the vermiform process is obtained and persists for more than 24 hours. In many instances of chronic appendicitis the lumen is partly obliterated or greatly constricted at the base or throughout its course, so that a filling with barium is not obtainable.

Finally, attention should be called to the greater dilatation of the right pupil as compared with the left (anisocoria), as an objective sign of chronic appendicitis. Buchman of Rostow was the first one to study this phenomenon on 3500 cases.

In 1914, Masson and Gosset published a monograph on carcinoid of the appendix which they correlated with lesions of the sympathetic nervous system. These tumors represent extreme changes in the anatomic structure of the sympathetic nerve cell elements located between the muscular layers of the appendix (Auerbach) or in the submucosa (Meissner). In patients operated on for chronic appendiictis, Sawitzkij[1] was able to demonstrate miscroscopic changes in the sympathicus cells and fibers. These changes, consisting of hyperplasia of the cells and fibers, are responsible for the anisocoria observed in chronic appendicitis. The connecting sympathetic fibers belong to the superior mesenteric plexus. They pass through the solar plexus to the ninth and tenth dorsal spinal segment (greater splanchnic nerve). Running along the vertebral column, some fibers are connected with the cilio-spinal center situated between the seventh cervical

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* Read before the Wisconsin Academy of Surgery, December 3, 1942.

and the first thoracic segment. Within the rami communicantes they reach the stellate ganglion of the sympathetic system, then continue to the superior cervical ganglion. Running within the internal carotid plexus and joining the long ciliary nerve, these fibers reach Mueller's muscle and the dilator of pupillae muscle. These muscles are responsible for the dilatation of the homolateral (right) pupil.

In cases where the left pupil is wider, Buchman assumed that the corresponding fibers of the mesenteric plexus reach the eleventh dorsal spinal segment instead of the ninth or tenth, cross over to the opposite side and upwards, causing a heterolateral anisocoria.

Pathological changes in the sympathetic nerves and fibers within the appendix, as demonstrated by Sawitzkij, cause homolateral or heterolateral anisocoria. It is, therefore, a reliable symptom for chronic appendicitis.

When testing a person for anisocoria, diffuse bright light is preferable. The patient is told to look at a distant object such as ceiling. Mechanical stimulation of the pupils is then produced by pinching the skin anywhere on the body, or by a flash of light near the pupils. In the presence of chronic appendicitis, pressure is used over a tender McBurney's point as a pupillary stimulant and differences in size of the two pupils observed.

Syphilis, pulmonary tuberculosis and inflammatory or neoplastic lesions of the brain, must be excluded inasmuch as they also may cause anisocoria.

Buchman studied 2000 cases of chronic appendicitis which were confirmed at operation. His conclusions were that in 88 per cent of the patients the right pupil was wider than the left one: in 6 per cent the left one was wider: and in the remaining 6 per cent both pupils were equal. In a second series of 1500 cases Buchman observed a wider right pupil in 93 per cent of the patients.

This symptom was studied in 120 patients operated on for chronic appendicitis and the diagnosis confirmed by pathologic examination of the specimen obtained at the time of operation. My series consisted of 34 males and 86 females, ranging between 10 and 50 years of age.

Age	Cases	Male	Female
10-20	32	10	22
21-30	58	14	44
31-40	22	10	12
41-50	8	0	8

In 83.3 per cent of the cases a wider right pupil was noted; in 6.6 per cent the left pupil was wider; in 10 per cent of the cases no anisocoria could be observed. Clinically, these were cases of repeated exacerbations of a chronic inflammation of the vermiform process.

These patients were followed up 2½ to 5 months after operation. The difference in the two pupils had disappeared, even when using skin or light stimulation. This finding confirms analogous observations of Buchman and Sawitzkij.

An effort was made to produce this symptom in other abdominal conditions such as cholecystitis, and in gynecological lesions and the findings of Buchman and Sawitzkij that no anisocoria can be demonstrated in these conditions were confirmed. This is to be expected inasmuch as pathological changes in the sympathicus of the appendix are responsible for this phenomenon.

SUMMARY

Anisocoria is, in my experience, a very valuable additional diagnostic aid in cases of suspected chronic appendicitis provided syphilis, pulmonary tuberculosis, and inflammatory or neoplastic lesions of the brain or spinal cord are excluded.

RÉSUMÉ

L'aniscoria est dans l'opinion de l'auteur une aide de valeur dans le diagnostic de l'appendicite chronique pourvu qu'on puisse exclure la syphilis, la tuberculose pulmonaire, et les lésions inflammatoires ou néoplastiques du cerveau ou de la moelle épinière.

SUMARIO

La anisocoria, en la opinión del autor, ayuda en el diagnóstico de la apendicitis crónica, siempre y cuando no se deba a la sífilis, a la tuberculosis pulmonar, o a lesiones imflamatorias o neoplásticas del sistema nervioso central.

Выводы

Анизокория очень существенный диагностический признак хронического апендицита, если, конечно, исключен сифилис, легочный туберкулез, и воспламенительные злокачественныя болезни мозга и спинного мозга.

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DUES EXEMPTION FOR THOSE ENGAGED IN ACTIVE MILITARY SERVICE

At the meeting of the United States Chapter of the International College of Surgeons held in Chicago on March 30, 1941, it was unanimously agreed by the Executive Council that Associate Members, Members and Fellows of the International College of Surgeons are exempt from payment of dues during the period of active military service.

Radon Ointment in the Treatment of Indolent Ulcers
An Experimental Study*

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EUGENE DE SAVITSCH, M.D., F.I.C.S.
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A STUDY is presented dealing with the use of radon ointment in the therapy of indolent or varicose ulcers, no comprehensive data on which is included in the numerous published reports dealing with the application of Radon in dermatological involvements.

The therapeutic use of this preparation was first attempted by Strazburger[1] in 1921. His work was followed by the reports of Uhlmann[2], Isaak[3], Langer[4], Happel[5], Lomholt[6], Veebrink[7] and others.

THEORETICAL CONSIDERATIONS

Radon, a gas, is produced by radium at a constant rate and in an amount directly proportional to the quantity of radium present. It is collected in a vacuum and mixed with anhydrous lanolin. Anhydrous lanolin takes up approximately nine times as much emanation as the same volume of air, and thirty-six times as much radon as the same volume of water. This mixture of radon emanation, a relatively fat soluble gas, and anhydrous lanolin is dispensed in collapsible tubes as *Radon Ointment.* The amount of radon present is controlled by varying the amount of lanolin or radon. The radio activity of the ointment is measured by means of an electroscope and is usually expressed in terms of electrostatic units (E.S.U.) per cubic centimeter of the ointment, one electrostatic unit equalling 0.363 microcuries.

Radon, like all radium derivatives, undergoes constant disintegration. Roughly, one can say that the ointment loses half of its radioactive strength in four days, three-quarters of its strength in eight days and seven-eighths in twelve days. In other words, the loss amounts to 16.5 per cent every twenty-four hours.

The biological effect of radon ointment depends upon the alpha and beta wave radiation which is given off. The alpha rays are an abundant source of radiation but they penetrate only a short distance into the skin, almost one hundred percent being absorbed in the first millimeter of skin. As approximately 85 per cent of the total radiant energy of radon is due to the alpha waves, the biologic effect is almost entirely superficial.

Beta rays constitute about five percent of the radiant energy and are absorbed in the first few millimeters of skin. In fact, almost one hundred percent of both the alpha and beta waves are absorbed at a depth of one centimeter. The effect of the gamma rays is more diffuse. A depth of fifty-one centimeters is reached by the time 90 per cent of the energy is lost.

As to the primary effect of radon ointment, Isaak[3] has calculated that 13.2

per cent of the radiant energy is liberated in the first centimeter of tissue. This is forty-four times the amount of energy expended at this depth by ordinary sealed preparations or sources of gamma waves of the same initial strength. Most of the remaining energy is dissipated. The differential in the amount of energy absorbed in the first centimeter of tissue from radon ointment and from other sources of radiation explains why a relatively minute amount of radon is effective.

The amount of energy liberated corresponds to a stimulating dose. Clinically this was demonstrated in several very fair-skinned individuals by an erythema and subsequent scaling, which responded readily to anti-phlogistic treatment. Although large doses of radioactive substances may produce untoward effects leading to epilation, telangiectasis, atrophy and ulceration, no instance of such developments was noted in our series.

EXPERIMENTAL WORK

Seventy ambulatory patients that failed to respond to the usual topical forms of treatment were secured from the clinics of Providence Hospital and the Hospital of the Georgetown University School of Medicine for experimental study. Routine laboratory tests were made, including hematology, urinalysis and serology, and were found to be within normal limits in all instances unless specifically mentioned in the patient's case history. It was found that a substantial proportion of the patients was unsuitable for experimental work because of gummata, chronic osteomyelitic sinuses, early varicose stasis dermatitis, etc. Of the remainder only fifteen received sufficient treatment to warrant inclusion in this study. The balance either failed to report with sufficient regularity to make dependable and objective study possible or abandoned treatment of their own will after a few applications.

Radon ointment was applied twice weekly and sealed immediately with oiled silk or rubber dam. Only an occasional case was not sealed and this was usually due to a condition of the adjacent skin contraindicating the application of adhesive tape. The patients were instructed to remove the seal and the ointment twenty-four hours after application and to apply a bland ointment. All cases of varicose ulcers wore elastic bandages during the course of treatment.

The technic of application was as follows: The lesions were cleaned with saline or boric acid solution and then a layer of radon ointment was applied to a depth of one millimeter. Thus one cubic centimeter was used to cover an area of ten square centimeters. A gauze flap was applied over the ointment and covered with a piece of rubber dam or oiled silk. This was immediately sealed with adhesive so that none of the volatile radon would escape. A gauze roller bandage was then applied to reinforce the adhesive seal. This technic of sealing was followed whenever possible. The procedure was repeated twice weekly unless there was some reason for substituting another form of therapy, as, for example, the appearance of erythema following several applications of radon ointment or the request of the patient for another type of therapy. Throughout this experimentation radon ointment with an activity of two hundred electrostatic units per cubic centimeter was used, this presumably being the optimum strength for the treatment of such lesions (8). Photographs were made of the majority of the lesions and in some cases were taken at regular intervals to note the progress of the lesion.

CASE HISTORIES

CASE 1. A colored man, aged 67, fifty years earlier had an attack of typhoid fever that "went down into the left leg" leaving it larger than normal. This condition persisted but caused no difficulty. Physical examination revealed a blood pressure of 164 systolic and 110 diastolic, with hypertensive heart disease, grade I.

A blow on the ankle in 1936 had broken the skin of the left leg, causing an ulcer which progressed gradually with periods of remission. From 1936 to 1938, various topical applications were irregularly administered. In 1941, routine Unna's Paste boots were applied with little effect.

Examination of the left leg revealed a generalized enlargement, with dilated and tortuous superficial veins. Numerous ulcers, varying from 1 to 3 cm. in diameter, extended from the knee to the malleoli, mainly on the anterior surface. The intervening skin was nodular, indurated and pigmented with areas of "heaped-up" epithelium.

Treatment began in May, 1942 and continued into July, 1942. Nine applications of radon ointment were applied to the ulcers but not sealed because of the extent of the lesions. t intervals, and subsequent to the radon erapy, scarlet red and allantomide were sed, with no change in the lesions. Subjectively, allantomide gave the most relief. Results of treatment were negative.

Case 2. A colored woman, aged 65, had a thrombophlebitis of the left lower extremity in 1936. During the past ten years there had been three recurrences of ulcers of the right leg. The present areas, varying in size from a few millimeters to one large ulcer approximately 4 by 8 cm. in size, appeared in August, 1941. The intervening skin was of tissue-paper thinness and extremely friable to trauma. Routine application of Unna's Paste boots was made from 1941 to May, 1942, without definite improvement.

The patient was given 18 applications of radon ointment, some sealed with rubber, between May and October, 1942. The first 12 applications, made twice weekly, brought no improvement; the next 6 were interspersed with vitamin A and D ointment. For two months thereafter vitamin A and D ointment and allantomide were used, with similar lack of results. Difficulty in sealing was encountered.

Case 3. A colored woman, aged 49, for an unknown duration of time suffered from a blood pressure of 240 systolic and 120 diastolic, with hypertensive heart disease, grade II.

An ulcer first appeared in April, 1941 and was treated with various topical applications, which produced slow but progressive improvement. During 1942, Unna's Paste boots were applied at regular intervals. When treatment with radon was begun, there were two lesions about 1½ to 2 cm. in diameter on the anterior aspect of the tibia, connected by a small isthmus of ulceration.

From May, 1942 to August, 1942, eleven applications of radon ointment were used, producing slow continued improvement. The patient voluntarily left the clinic with a single ulcer about 1 cm. in diameter.

Case 4. A white man, aged 60, came to the clinic in 1938 and was found to have chronic bronchitis and mild emphysema. In 1939 he suffered from chronic cholecystitis, which re-

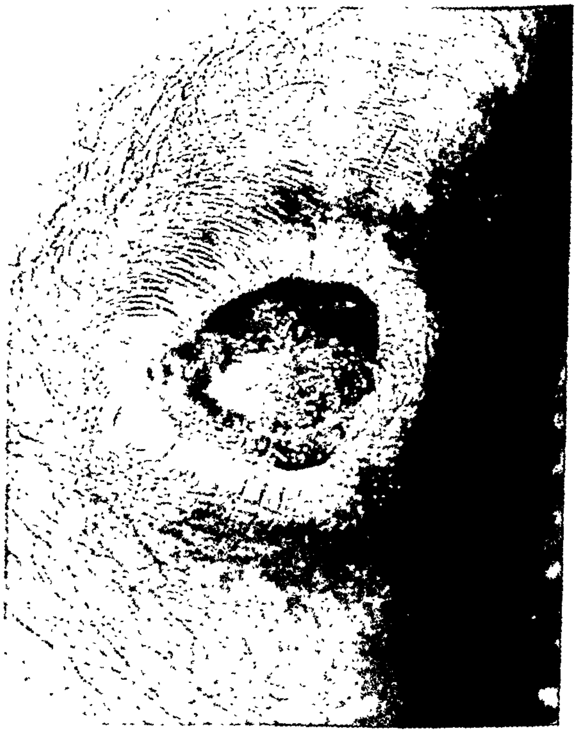


Fig. 1a. An ulcer of [illegible] months' duration before treatment with radon ointment.

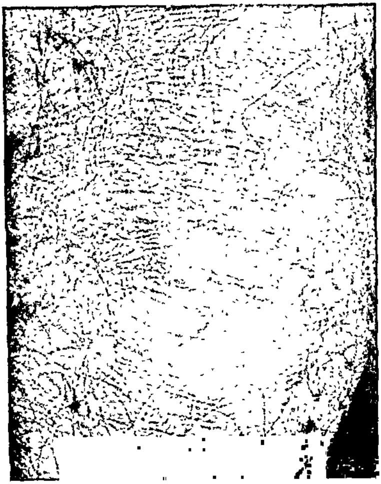


Fig 1b. The same ulcer during treatment with radon ointment.

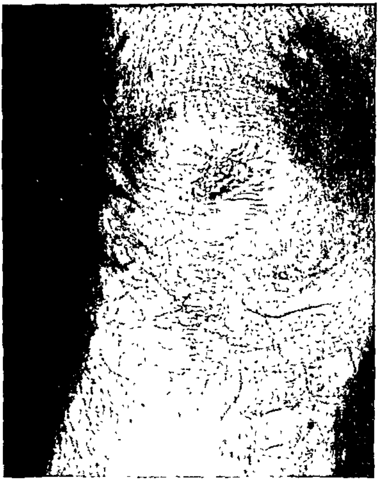


Fig 1c Thirty days later, after conclusion of treatment with radon ointment Note erythema and scaling occasionally produced by radon ointment.

sponded to conservative medical management and diet. In September, 1939, congestive heart failure due to hypertensive arteriosclerotic heart disease developed. At intervals during 1939 and 1940, the patient attended the clinic for intermittent attacks of chronic prostatism, for which he refused surgical treatment. At the time of the present experimentation these conditions were minimal. In 1937, a varicose ulcer appeared on the right leg. This healed, leaving a pigmented scarred area.

From February to May, 1942, a rounded punched-out necrotic looking ulcer on the left knee showed no tendency to heal (Fig. 1). From May to August, the patient received nine applications of radon ointment, with a substitution of scarlet red and allantomide when erythema occurred. Radon ointment stimulated epithelization and after two or three successive treatments there was considerable erythematous reaction of the surrounding skin, with some subjective discomfort. Complete healing followed. No recurrence was noted in the next three months.

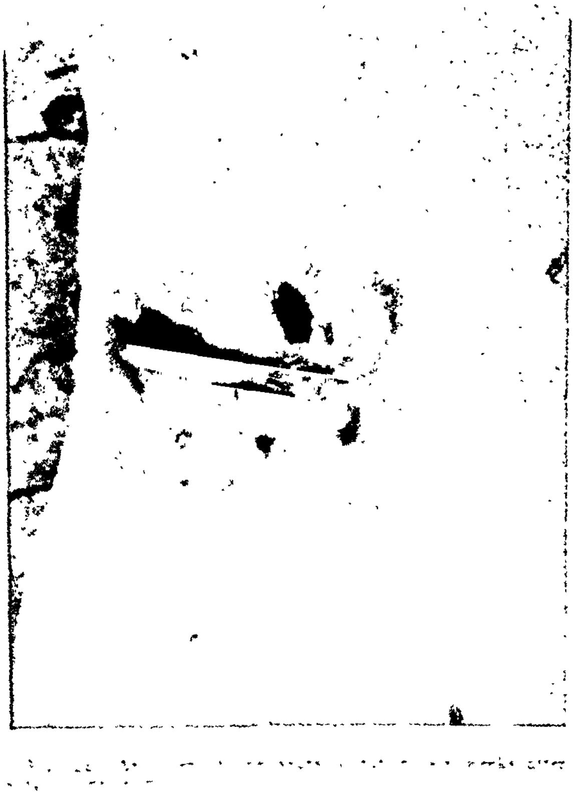
Case 5. A white woman, aged 16, in May, 1941, received a blow on the dorsum of the right foot that resulted in the development of an extremely painful ulcer about one-half by 2½ cm. in size. Treatment was administered with various topical applications. In April, 1942, the lesion was completely excised with a primary closure. This broke down after two weeks. The ulcer did not change in size and consisted of heaped-up granulation tissue with several satellite areas where the sutures had been (Fig. 2).

Beginning in May, 1942, twelve applications of radon ointment were applied. Occasionally, when erythema was produced, allantomide and scarlet red were used (eight applications). The ulcer healed completely and the pain disappeared. There was no recurrence in six months.

Case 6. A white woman, aged 42, in July, 1941, developed a tumor the size of a walnut, diagnosed histologically as a basal cell carcinoma, which was excised from the middle of the back. The wound was packed open and lowed to drain but failed to heal. In May, 1942, x-rays of the vertebral column and four separate biopsy specimens failed to reveal malignancy. At the time of treatment with radon ointment, the ulcer was about 2½ to 3 cm. in diameter and extended inward to the vertebrae. Previous therapy, consisting mainly of sulfanilamide powder and dry dressings applied at irregular intervals, proved inadequate.

Six applications of radon ointment were made during May and June, 1942, with no results. Later routine therapy with peroxide rinsing and sulfanilamide powder produced slow clearing.

Case 7. A colored woman, aged 57, in February, 1942, had an ulcer 4 by 6 cm. in size, with two small satellite ulcers, on the lateral surface of the left leg. Examination revealed moderately dilated superficial varicosities.



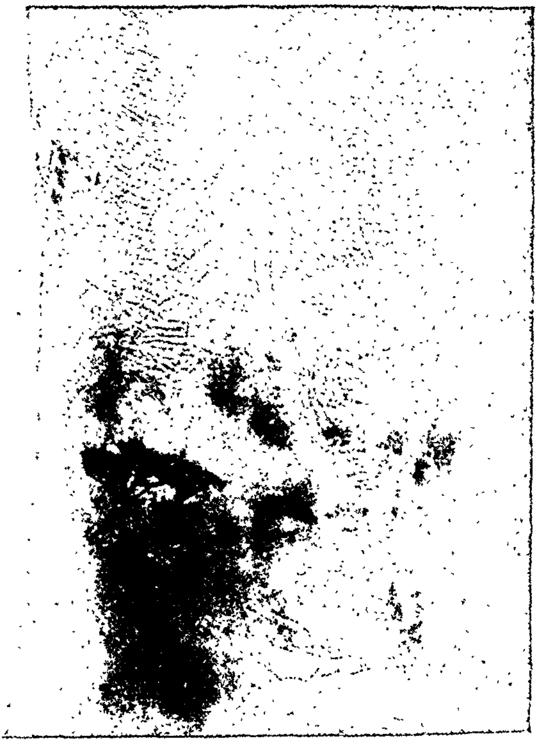


Fig. 2b. The same ulcer during treatment with radon ointment.

Five applications of radon ointment with five alternate applications of scarlet red or allantomide, were made during July and August, 1942. Treatment with radon ointment was then discontinued because the patient complained of a soreness and burning in the leg. The result of treatment was negative.

Case 8. A colored woman, aged 48, complained of chronic varicose ulcers. For three years, routine topical applications and Unna's Paste boots were applied, producing periods of remission. In August, 1942, there were several small ulcers, the largest being 2 by 3 cm. in size, with typical induration and scar tissue contractures. Moderate superficial varicosities were present. From August to November, 1942, eight applications of radon ointment and 22 applications of scarlet red or allantomide were made. Results were negative.

Case 9. A colored woman, aged 51, had been treated for seven years in the clinic for hypertension and obesity. The physical findings showed a blood pressure of 245 systolic and 120 diastolic and hypertensive heart dis-

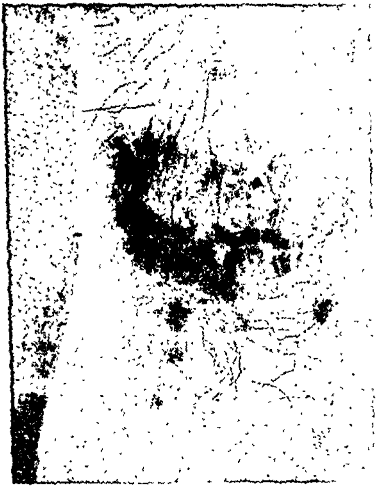


Fig. 2c. The ulcer 30 days later, showing the healing produced by radon ointment.

ease grade I. Approximately 90 antiluetic treatments had been given from 1936 to 1938. The Kahn test was found positive prior to antiluetic treatments, but negative when considered for radon treatment.

In September, 1942, several small superficial ulcers, varying from 3 to 5 cm. in diameter, developed on the anterior and lateral aspects of the left leg. These were surrounded by erythema and associated with pigmentation and slight induration.

Eleven applications of radon ointment produced slow but continued improvement. One month after complete healing occurred, an excoriation eczema developed in the site of the ulcer and spread slowly over the body.

Case 10. A colored woman, aged 46, had a history for 32 years of obesity and marked varicose veins. Physical findings revealed an essential hypertension with a blood pressure of 180 systolic and 120 diastolic. In 1930, a varicose ulcer of the right leg was treated by topical applications and injection of the varices resulting in clearing of the lesion.

The present lesion, approximately 2½ by 1 cm. in diameter, with a smaller communicating ulcer, developed in March, 1942, following a trivial injury. Dryness of the skin, induration and marked scar tissue contracture was noted.

Twenty-three applications of radon ointment were made between June, 1942, and February, 1943, without results *(Fig. 3)*. Later sodium morrhuate injection of the varicosities produced slow healing of the lesion.

Case 11. A white man, aged 60, in 1918 developed a pyogenic arthritis, causing ankylosis of the left knee. In 1938, he suffered a fracture of the neck of the left femur, which produced ankylosis of the hip joint and shortening of the left lower extremity, with ultimate atrophy. Impaired arterial circulation in this extremity was evidenced by dependent rubor and elevated pallor. The peripheral pulses were present and of good quality. There were no varicose veins.

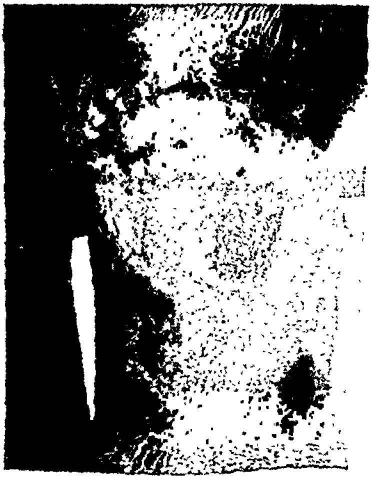


Fig. 3. Case 10. A chronic varicose ulcer after 23 applications of radon ointment during a period of 8 months. This shows no appreciable change from the original lesion.

In June, 1941, a trivial injury to the left anterior tibial region resulted in several small ulcers, which gradually became larger and showed no tendency to heal. In October, 1942, there was one large central ulcer measuring 2½ by 7 cm. in diameter and several small ulcers 1 cm. in diameter, in adjacent areas.

Nine applications of radon from October, 1942, to February, 1943, produced slight regression of the large ulcer, but the adhesive seal continually produced several small new areas of ulceration.

CASE 12. A colored woman, aged 49, had essential hypertension with compensated hypertensive heart disease with a blood pressure of 200 systolic and 120 diastolic. There were marked bilateral varicosities with a positive Trendelenburg test and negative Perthes test.

In March, 1942, the patient injured the anterior tibial area and painted the lesion with tincture of iodine. This caused a typical varicose ulcer, without induration or pigmentation, measuring about 4 cm. in diameter.

From September, 1942, to January, 1943, 18 applications of radon ointment were made. On October 22, 1942, a high saphenous liga- on was performed, followed by injection of ie varicosities with sodium morrhuate. The ulcer showed slight response to radon and healed completely after the surgical procedures.

CASE 13. A colored woman, aged 50, had an essential hypertension with a blood pressure of 200 systolic and 100 diastolic, and compensated hypertensive heart disease, grade II. In December, 1941, the patient fell and scratched her leg, causing the development of a large varicose ulcer, 6 by 8 cm. in diameter.

Twelve applications of radon ointment between September and November, 1941, brought no results. During treatment, congestive heart failure developed, necessitating hospitalization for six weeks. Following bed rest and use of a heat cradle, the ulcer healed completely. Shortly afterward while the patient was ambulatory it reappeared

CASE 14. A colored man, aged 60, had an enlargement [illegible] the left greater saphenous [illegible] and was [illegible] A Trendelenburg test was pos- [illegible]

with 2 and 5 applications of radon ointment. During the second occasion the ulcer progressed despite treatment, therefore a high saphenous ligation and retrograde injection was performed, using 50 per cent glucose. Later, additional injections of the greater saphenous vein were made with sodium morrhuate. The ulcer healed after surgical procedures.

CASE 15. A white man, aged 35, in August, 1941, received a burn over the inner aspect of the right ankle. Repair by skin graft was unsuccessful. In August, 1942, the lesion was an infected superficial ulcer, 3 by 6 cm. in diameter (Fig. 4).

Nine applications of radon ointment were made. No improvement was noted and the patient voluntarily discontinued treatment.

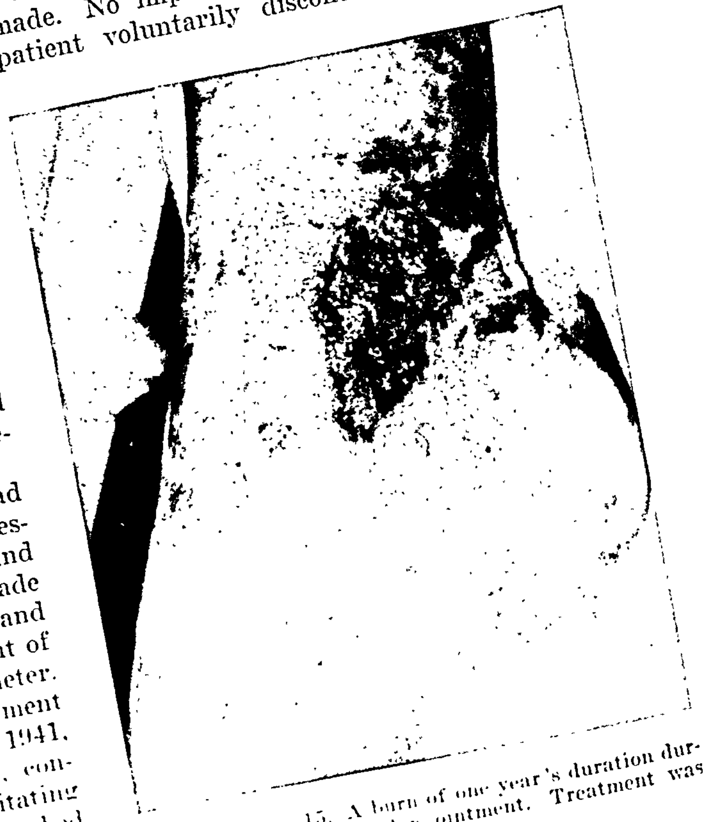


Fig. 4. Case 15. A burn of one year's duration during treatment with radon ointment. Treatment was without effect

SUMMARY

Fifteen selected and controlled cases representing various forms of indolent ulcers were treated with five to twenty-three applications of radon ointment. Surprisingly good results were obtained in three cases, one a "thrombophlebitic" ulcer (Case 9) and the other two chronic ulcers of unknown etiology (Cases 4 and 5). Three patients (Cases 3, 11, 12) were improved after varying amounts of treatment but in none did complete healing occur except in one varicose ulcer (Case 12) in which radon treatment was supplemented by a surgical procedure.

Of the nine cases of varicose ulcers, two (Cases 3, 12) improved under treatment and seven showed no response. One patient (Case 13) with a chronic varicose ulcer, who has shown no response to therapy, was forced to bed by congestive heart failure, and the ulcer cleared completely in five weeks with no specific therapy except a heat cradle.

W[illegible] hig[illegible] the varices with a sclerosing agent, were performed, definite improvement occurred irrespective of the result of previous therapy.

CONCLUSIONS

1. Radon Ointment in the dosage and method outlined is of but slight value in the treatment of chronic varicose ulcers.
2. Radon treatment in cases of indolent ulcers of unknown etiology gave eminently satisfactory results.
3. No harmful or toxic effects of any variety were observed.

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SUMARIO

Quince casos representando diferentes tipos de úlceras indolentes fueron tratados con cinco a veintitres aplicaciones del unguento de radón. Los resultados terapéuticos fueron excelentes en un caso de úlcera trombofeblítica y en dos casos de úlceras crónicas de etiología indeterminada. Tres de los pacientes en la serie mejoraron con el tratamiento, pero solo uno de estos tres, un caso de úlcera varicosa, cicatrizó completamente, cuando se complemento el tratamiento por el radón con el de la cirugía operatoria.

De nueve casos de úlceras varicosas solo dos mostraron cierta mejoría, en los otros siete los resultados fueron negativos.

Cuando se usaron ciertos procedimientos quirúrgicos, tal como la ligación alta de la vena safena interna y la inyección de substancias esclerosantes en las venas varicosas se logró una mejoría definitiva. Este mejoría resultó irrespectivamente de todo tratamiento previo.

SOMMAIRE

Quinze cas d'ulcère chronique de la jambe furent soumis à un traitement variant de cinq à vingt-trois applications d'onguent radon. D'excellent résultats furent obtenus dans un cas d'ulcère thrombophlébitique et aussi dans deux cas d'ulcère chronique d'origine inconnues. Il y eut quelque amélioration dan tous les cas, mais aucune guérison complète.

De neuf cas d'ulcère variqueux, deux montrèrent quelque amélioration et sept cas ne donnèrent que des résultats négligibles. Un cas guérit dans l'espace de cinq semaines sans traitement autre que la chaleur.

Dans tous les cas soumis à un traitement opératoire, tel que [illegible] te [illegible]rre

de la saphène interne, l’injection de solutions sclérosantes, etc. une amélioration notable fut obtenue.

Выводы

Радон в виде мази употреблялся в лечении 15-и случаев хронической язвы всевозможных типов. Превосходный результат отмечен был в одном случае тромбофлебетической язвы и в двух случаях язвы неизвестной этиологии. Улучшение было отмечено у трех пациентов после продолжительного лечения, но совершенное излечение состоялось только у одного пациента с варикозной язвой после лечения радоном и дополнительной операцией.

Из 9 случаев варикозных язв улучшение отмеченно у двух, никакого улучшения у семи.

Всякий раз когда делалась высокая подвязка коженой вены и впрыскивание склерозических веществ в расширенные узлы вен, хорошие результаты, как правило, отмечались; независимо от предидущего лечения.

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SCIENTIFIC PAPERS

Essayists will please deliver papers to the Secretary.

Lipomata of the Uterus

CHESTER A. PEAKE, M.D., F.A.C.S., F.I.C.S.
BROOKLYN, NEW YORK

LIPOMATA of the uterus, as the name implies, are tumors composed chiefly of fat cells. A mesh work of other tissue accompanies the numerous fat globules. If a large amount of fibrous tissue is present, the pathologic condition is considered lipofibroma, and if considerable muscle tissue abounds, either a lipomyoma or a fibromyolipoma.

It is surprising to find how little is written on this subject and how few cases have actually been encountered among the great number of uterine tumors receiving laboratory examination in recent years. Apparently nothing has been written about the symptomatology of the condition, either from an objective or subjective standpoint.

The histologic origin of these tumors has been unsatisfactorily explained, and has been differently interpreted by various writers. Some accept Conheim's theory that they are due to hyperplasia of embryonal fat, others to lipoblastic dislocations, because it could not be considered that fat cells developed from either connective or muscle tissue; another theory is that fat proliferated along neighboring structures. Bruennings favored the view that muscle cells were converted into fat cells and Jacobson attributed the development of the fat cells to the infiltration of the connective tissue cells with fat globules.

Wilm's explanation of the origin of this type of tumor by displacement of embryonal rests along the Wolffian duc seems the most credible. In the female this duct sometimes disappears or onl vestigal remnants persist as Gartner' duct. When complete it passes from th epoophoron through the broad ligament at first parallel with the fallopian tube thence more diagonally as the base of triangle whose opposite angle is forme by the uterine portion of the fallopia tube and body of the uterus. Near th level of the internal os the duct passe into the uterine substance gradually bu does not reach the mucosa. Beyond th uterus it may extend to the lateral wal of the vagina to the hymen.

True lipomata are considered to b benign, but as most of them have bee found by accident during operations fo other conditions or by autopsy, thei true nature has not been determined Sufficient data has not been compile from actual experience to state whethe they can be placed strictly in the benig class. In my experience, no recurrenc has been noted since operation, nor i there evidence of metastasis, as ofte seen in malignancy.

The patient's history and objecti signs did not differ materially from th usual fibroidal syndrome except tha less hemorrhage was encountered an longer periods intervened between bleeding spells. Apparently there was a slowe period of development than in the average fibroid or in malignant cases and th tumor mass an usually large, smoot boggy mass, rather than hard multinodular indurations. No evidence of any glandular enlargement has been noted in any of the cases recorded in the literature, which strengthens the theory that these tumors are not malignant. A co-existing myocarditis and anemia are present, as in most cases of fibrous manifestations. It is probably impossible to differentiate between this and many other types of uterine tumors without histologic examination of the tissue, although, macroscopically, oil globules can sometimes be expressed by pressure upon the cut surfaces of the tumor.

The presentation of the following case history may give a clearer picture of this type of tumor.

Mrs. H., aged 45, gave as her chief complaint dyspnea, swelling of the abdomen and profuse vaginal bleeding. About two years earlier, the patient had an attack of sudden sharp pain in the right hypochondrium and igastrium, accompanied by vomiting that sted about eight hours, followed by sudden relief. A similar attack occurred two and one-half weeks later. After that time, the patient was fairly well until nine weeks before examination, when she began to have dyspnea on exercising. This condition gradually became more severe. About the time of onset of shortness of breath, she began to flow excessively, the flow continuing for six weeks.

Her past history was negative. Menstruation began at 11 years without pain and remained regular until her marriage at the age of 20. From 1904 to 1911 she menstruated three weeks out of four, then ceased entirely for two years. Four years before being seen by me, she began to menstruate again at intervals of three to four months for periods of seven days. She had four full-term pregnancies; two and one-half weeks after the birth of the second child, the patient became weighing 200 pounds, with an anxious facial expression suggesting ovarian disease. Her teeth were in good condition, the pupil of her right eye was larger than the left, both reacting to light and accommodation. Her neck was short and thick with normal thyroid. Her chest was fat, breasts large and pendulous, with no nodules present, and the nipples were normal. The lungs were normal, the heart rather rapid, with scarcely perceptible beat. A marked haemic murmur was present. The abdomen was adipose and striated. A large, round, hard palpable mass extending from the pelvis up to and about three degrees above the umbilicus was felt. On either lateral abdominal quadrant there were cystic masses. Liver and spleen were not palpable. No tenderness was elicited over any part of the abdomen.

Pathology in the vaginal region was hard to determine, as the entire mass, involving the uterus, extended to the brim. The cervix was small; tubes and ovaries were not palpable. The anus was negative. The extremities, especially the legs, were extremely adipose; on the right leg just above the ankle there was an old scar, which apparently had been an ulcer healed sometime before. The right arm was paralyzed and somewhat atrophied. Bones, joints and glandular system were negative. The skin was rather pale, but not cachectic. Blood examination showed 3,500,000 erythrocytes; leukocytes, 6000; polymorphonuclear cells, 63 per cent; lymphocytes, 37 per cent; hemoglobin 47 per cent; color index, 0.67. The pathologist reported possible malignancy. Wassermann reaction was negative. Urinalysis showed specific gravity of 1010; trace of albumin; no sugar, acetone or bile. Microscopic examination was negative, except for an occasional hyaline cast.

As a suitable donor could not be obtained, a much desired preliminary blood transfusion was not done and therefore a hypodermoclysis of 1900 c.c. saline and glucose was given during the operation. The only pathologic condition found on opening the abdomen was a considerable amount of straw-colored fluid and an enormous mass due to enlargement of the uterus, which was apparently fibromatous in nature. Both tubes and ovaries and broad ligaments were large cystic masses, containing a thin straw-colored fluid; no enlarged glands or adhesions were found. A regular panhysterectomy was performed and no complications were encountered during the operation.

Macroscopic examination showed a gigantic tumor of the uterus with both adnexa weighing 12 pounds. The tumor was globular in shape, 23 cm. in diameter and completely surrounded by a thin layer of uterine muscularis, measuring 1 cm. in thickness. This muscular layer was easily peeled from the tumor mass which was well defined and largely composed of a yellow friable tissue, an irregular very narrow border zone of grayish and fibrous tissue fused with the yellow tissue in which was found small grayish islands. The cervix was missing. The uterine cavity was greatly distorted, dilated and elongated and spread over the convexity of the bulging tumor mass. A small polypoid body of 3 cm. in length protruded into the uterine cavity from one tube corner. It was covered with thickened mucosa and principally composed of the described yellowish structure. Both ovaries were markedly enlarged, measuring 4 by 3 by 2 cm. and 6 by 4 by 2 cm. Ovaries and tubes were very edematous, the former largely replaced by hyaline tissue.

Microscopic section from the polyp showed a very edematous portion of the mucosa with irregular and dilated glands; the mucosa in other portions was in similar condition. The ovarian tissue showed marked edema, hyaline changes of the stroma, the cortex greatly broadened. The grayish portion of the tumor was largely composed of dense myomatous tissue. The smooth muscle fibres appeared as compact masses without any interstitial tissue. Silver impregnation (Bielschowsky-Marsch) revealed the presence of a uniform net-work of mygolia and meshing, the muscle cells (Van Gieson stain) leaving similar results, with occasional gaps in the muscle containing fat cells. The muscular structures were gradually changing into regular alveolar fat which, in turn, contained small areas of smooth musculature spreading throughout the septa of the fat tissue. In the immediate neighborhood were found large cells with a smooth slightly eosiophilic protoplasm and hyperchromatic round nuclei (lymphoblasts) particularly in Zenker sections.

The diagnosis was benign lipomyoma of the uterus.

SUMMARY

The literature contains little regarding lipomata of the uterus or their symptomatology. Various theories regarding their etiology are discussed. These lipomata are considered benign. Since operation no evidence of metastasis has been observed in the case reported.

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SOMMAIRE

La littérature renferme peu de renseignements sur les lipomes de l'utérus et sur leur symptomatologie. L'auteur discute quelques théories sur leur étiologie. Ces lipomes sont benins. Aucun cas de métastase après ablation n'a été observé.

SUMARIO

La literatura médica es pobre con respecto al estudio de los lipomas del útero. Se discute las diferentes teorias etiológicas de estos tumores. Estos lipomas son considerados como tumores benignos. En el caso decrito no se han observado evidencias de metastasis.

Выводы

Литературные данные о липоме матки скудны. Существуют несколько теорий касательно ее Этиологии. Опухоль как видно доброкачесственна. Метастазы не появились после *операции* произведенной *автором.*

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Литературные данные о липоме матки скудны. Существуют несколько теорий касательно ее Этиологии. Опухоль как видно доброкачесственна. Метастазы не появились после операции произведенной автором.

Esser Inlays as a Practical Auxiliary Operation*

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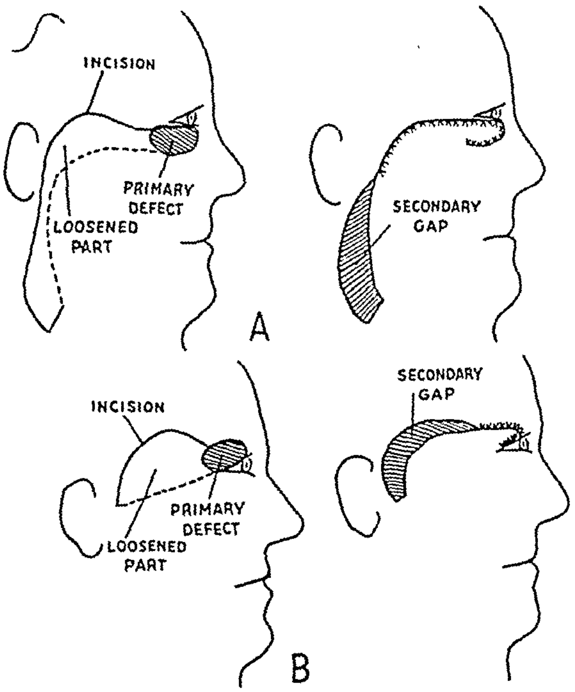
MONACO

THE procedure for the use of epithelial inlays was first published in 1916 in Germany. Subsequently, it was described in 1917 in America and from time to time in many countries under different names. It is now generally used in plastic and structive surgery or as a free skin graft or mould under the generally accepted term of the "Esser Inlay."

The Esser inlay is used to cover fresh or old wounds or various skin defects with a thin free skin graft or in conjunction with free skin transplants. It may be the principal feature of an peration or supplementary to other perations where it is desirable to avoid an open granulating surface healing *per secundam*. It needs no emphasis that scar tissue is the final effect of all granulations.

I have shown in many reports, based upon twenty-five years of experience, the versatility and usefulness of this method, if properly carried out. A few of its uses are reconstruction of a urinary bladder, ureter, urethra, esophagus, etc. In syndactilism the method renders particularly valuable service.

It is fundamental that the surgeon become versatile in the manipulations of dental compound or stent. A dentist may initiate the beginner into this technic or experiments may be made in modeling of wounds of various forms, shapes and sizes.



The Esser Method

New stent is softened by emersion in hot water. No antiseptics are used. It is then applied to the wound with pressure and is permitted to rest on the selected surface for ten minutes, following which it is hardened by means of cold water. The mould is then removed and covered by a thin free skin graft, following which it is replaced on the wound. It must be kept in mind that the raw surface of the graft is to face the wound to be covered. For about a week compression is exerted with an elastic bandage. U-shaped sutures under proper tension may be used, the object being to steady the mould on the wound, to avoid any bleeding or accumulation of secretions between the transplanted graft and the wound surface. As a general rule, the wound heals in about a week.

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*Presented at the Third International Assembly of the International College of Surgeons held in Mexico City, August, 1941.

Gratifying results have been obtained by the use of the inlay in such urologic conditions as difficult urethral strictures or in the repair of epispadias or hypospadias. In certain gynecologic conditions, such as the construction of a new vagina, the repair of urethral fistulæ, etc., excellent results have been observed. Again, in orthopedic surgery the inlay operation is useful in reconstruction of stumps, operations on the muscles and joints and other pathologic conditions. In dermatologic practice, in radiologic conditions, and in the pathologic entities following tropical diseases, this procedure may be resorted to with confidence. The inlay has proved of great value, particularly in ophthalmologic operations, in stomatology and in rhinology.

Many difficult problems may be solved in general surgery if the inlay procedure is used as an auxiliary operation. Various types of wounds are frequently covered with skin in a week. This is equally true in chronic pus pockets, granulating scars and indolent ulcerations, after excision to make fresh wounds. Defects of the mucous membranes, serous or other membranes can be healed by the inlay procedure.

I have stressed the versatility of this method as an aid in the formation of an artificial anus. It should be stated that in facial defects or in injuries of the limbs, the exposed surfaces should at once be covered with skin in order to obtain dry aseptic surfaces for subsequent interventions and to avoid scarring, particularly in the small muscles of the hands where scar formation, the result of prolonged granulation, creates much havoc. The immobilization of the parts by the inlay frustrates infections or complications even in infected wounds, when the viability of the cell structures is not interfered with by disinfectants. We have never encountered serious infections during the use of the inlay.

In Case I, a man of 26 lost his nose as a result of twenty years of suppuration. The soft structures as well as the skeletal framework were destroyed. Formation of a nose had not been attempted because of a persistent frontal sinus fistula which was suppurating and because of the threatening appearance of the right canthus of the eye. In cases of this type, known as "disk face," an inlay is made, beginning from the fornix in the mouth, in a wound separating the central facial skin including the affected nose, which is detached from its bony framework as far up as the orbits. A fist-sized pocket results. A skin graft enveloping the mould is inserted into the pocket. Two stout U-shaped wire stitches over gauze tampons press the inlay against the large wound surface and are permitted to remain *in situ* for a week, after which a large gauze tampon replaces the mould. Later, a light wire apparatus shaped to the desired form to replace the skeleton of the nose is fixed to the front teeth. This may be permitted to remain or be replaced by a free graft of costal cartilage in a manner I described and introduced during the first World War. Plastic corrections are made as desired to replace the alæ of the nose or other parts needing adjustments by pedicled flaps. However, the inlay procedure is the keynote of the operation (Figs. 1 and 2).

In Case 2, a nose was first fashioned from the structures of the forehead using an Esser biologic frontal flap. This flap contains in its pedicle nerves, lymph and blood-vessels but no skin. In the beginning the cartilaginous skeleton of the nose is placed under the skin of the forehead. Some weeks later, an inlay is made behind, between the periosteum and bone, to procure [illegible] the future ne[illegible] the forehead. This is done in such a manner that after about two weeks, when the nose is turned to be placed at its normal site, no open wound remains on the forehead. Corrections are made later (Figs. 3 and 4).

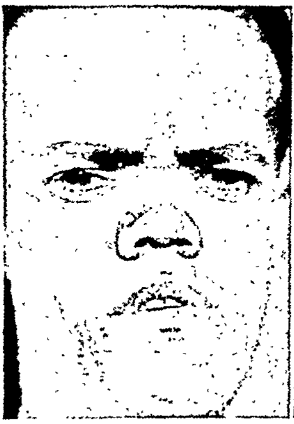

Fig. 1. Photograph of patient with suppuration of nose of 20 years' duration before operation.

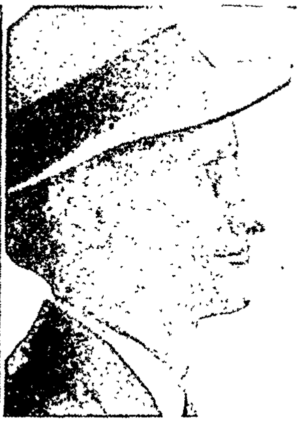

Fig. 2. Photograph of patient after operation.

In Case 3 the lower lip, the chin and he middle of the mandible were removed elsewhere for carcinoma. Intensive radium treatment destroyed the vitality of the wound and both cheeks. Attempts that had been made to cover the defect with flaps from the thorax failed. The patient came to me in this condition. An inlay was first made on his skull between the periosteum and bone. A biologic temporal flap was transported and made to replace the lower lip and chin. The deep pocket of skin now resulting behind the chin was filled by a prothesis made by a dentist. It was made to conform to the natural shape of the chin and was equipped with an artificial mandible and teeth. This prothesis was kept firmly in the pocket and steadied by fixation to the molar teeth of the patient who is thus able to masticate with this apparatus. The replacement of the vermilion border of the lip was accomplished by another operation. The biologic flap which forms the patient's new chin and lip contains the original contractile muscular structures and nerves. There is a luxurious growth of hair on his chin and cheeks, which was evident soon after the transplantation. The reason for this is that the pedicles were completely conserved and for that reason are endowed with ample circulation, viability and sensibility (Figs. 5 and 6).

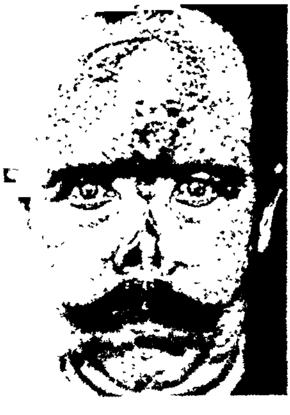

Fig. 3. Photograph of patient before operation.

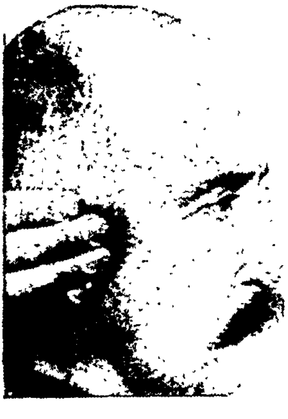

Fig. 4. Photograph of patient after operation, using biologic frontal flap.

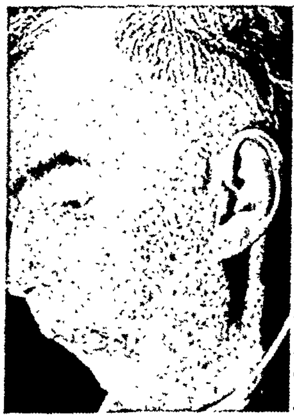

Fig. 5. Photograph of patient with carcinoma of chin before operation.

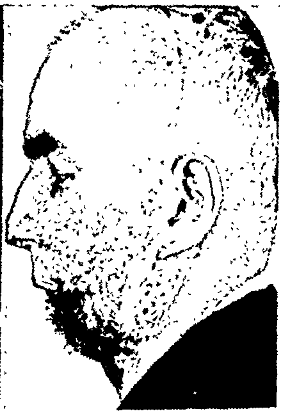

Fig. 6. Photograph of same patient after reconstruction of lower lip and chin.

SUMMARY

The "Esser Inlay" is described as a principal and auxiliary operation and its uses are indicated in plastic and structive surgery. Three cases are reported in which the inlay was successful.

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SUMARIO

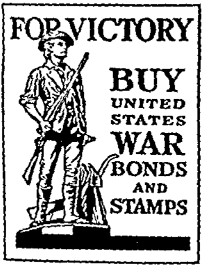
El autor describe el "Esser Inlay" como una operación principal auxiliar, y señala sus usos en cirugía plástica y constructiva. El indica las razones para su práctica y los principales puntos de su éxito.

RÉSUMÉ

Le "Esser Inlay," souvent nommés en France "moulage dermique," aussi bien comme opération principale que comme opération compétante est en usage général en Chirurgie plastique et structive. Le "Esser Inlay" est d'un intéret capital pour la solution des difficiles problèmes de la Chirurgie générale et de ses branches comme on peut étudier et voir dans les articles et livres d'Esser.

Выводы

Ессер описывает Ессеровскую Накладку (Инлей) как принципиальную или вспомагательную операцию и ее указания в пластической и строительной хирургии. Автор описывает три случая в которых метода накладки была успешно примененна.



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Hematoma Intracerebral por Traumatismo de Craneo*

(Intracerebral Hematoma)

MÁXIMO A. KARLEN, M.D.
MONTEVIDEO, URUGUAY

SUMMARY

The author presents a study of three well-selected cases of intracerebral hematoma, two of which are pathologic studies and the third describes the favorable results in a young man operated on the fifth day. Diagnostic symptoms are discussed, as well as the neurologic signs of localization and the therapeutic considerations.

L HEMATOMA intracerebral, consecutivo a un traumatismo craneano, es una lesión rara si se consideran sólo los casos de lesiones colectadas y localizades. Lecount admite que se observa aproximadamente en el 1 por ciento de las autopsias practicadas por traumatismos de cráneo. Descartando las formas graves acompañadas de contusión encefálica intensa, con hemorragias profusas, que llevan rápidamente a la muerte, quedan las formas circunscriptas, únicas accecibles a un tratamiento con probabilidadas de éxito. De los 3 casos que presentamos a continuación pertenece el 1° a la Clínica del Prof. Domingo Prat; el 2° nos fué cedido por el cirujano del Bureau del M.S.P., Dr. Fernando Etchegorry y el 3° fué estudiato y operado por el Dr. José P. Otero.

PRIMER CASO

R.R.M., 51 años, uruguayo, casado. Estando perfectamente bien de salud, durante una discusión en la calle, recibe un golpe de puño en la cara que provoca su caída hacia atrás. Queda en el suelo sin conocimiento. Los familiares refieren que después del accidente fué trasladado a su domicilio donde recuperó el conocimiento. Después de 3 horas se queja de malestar, instalándose simultáneamente obnubilación progresiva. El paciente ya no deglute los líquidos. Se reseulve hospitalizarlo.

Cinco horas después del traumatismo, llega al hospital en coma profundo. Desviación conjugada de la cara y de los ojos hacia le derecha. Estos últimos están animados de un lento movimiento de vaivén horizontal. Protusión ligera del ojo derecho, sin equimosis palpebrales ni conjuntivales. Contractura de los músculos faciales derechos, que hace resaltar más aún la parálisis facial izquierda. Pequeña equímosis fronto-parietal derecha. ematoma parietal derecho, de 5 cms. de diamétro, situado a 2 traveses de dedo de la línea media; se palpa otro más pequeño en la región occipital, también paramediano derecho. La movilización de la nuca ofrece una resistencia moderada. No sale sangre por ninguna de las cavidades naturales. El miembro superior derecho, contracturado en flexión, está animado de un temblor fino. El miembro inferior del mismo lado está contracturado en extensión. Hemiplegia izquierda.

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*Presented at the Third International Assembly of the International College of Surgeons held in Mexico City, August, 1941.

Reflejos tendinosos exagerados; los aquilianos son policinéticos. El signo de Babinski no sale por ninguna de las maniobras. Reflejos cremasterianos normales. Cutáneos abdominales dudosos. Se extraen 800 cc. de orina clara por cateterismo. Respiración profunda, con un ritmo de 22 por minuto. Pulso 96, regular y fuerte. Presión arterial 18½—9 (Vaquez). Temperatura 37 3/5 axilar.

Examen oftalmológico (Dr. W. Isola): Protusión ligera del ojo derecho. Miosis bilateral con ligera anisocoria, siendo la pupila derecha mayor que la izquierda. Fondo de ojo normal. Se intentó medir la presión de la arteria central de la retina (Baillard), pero no fué posible hacerla por los movimientos contínuos de los ojos.

La punción lumbar entre 4° y 5° V.L., en decúbito lateral, da salida a un líquido muy hipertenso, intensamente hemorrágico. Tensión inicial al Claude 74; después de retirar lentamente unos 30 cc., baja la presión a 25. El líquido C.R. extraído contiene 2.550.000 glóbulos rojos por m.m^3.

No mejora el estado del paciente después de la punción lumbar. Tampoco se puede evitar la agravación progresiva suministrando tónicos difusibles, y calentando e hidratando al paciente. El pulso se hace filiforme y se acelera progresicamente, la tensión arterial desciende, la respiración se enlentece y se hace más superficial. Muerte 2 horas después del ingreso al Servicio.

Autopsia practicada por el forense Dr. Rosemblatt: Equimosis y hematoma parietal derecho, paramediano, poco abundante. Otro hematoma más pequeño al nivel de la sutura occipito-parietal derecha. Fractura ántero posterior de la bóveda, paramediana derecha, que va desde el techo orbitario hasta el occipital. Al nivel de la sutura occipito-parietal se ramifica el trazo para rodear una esquirla irregular de 2 x 3 cms. El periostio presenta algunos desgarros sobre el trayecto de la fractura, por donde asoman coágulos sanguíneos. Levantada la bóveda craneana, queda al descubierto la duramadre, parcialmente desgarrada.

Sobre la zona rolándica se extiende un hematoma que penetra en la masa encefálica. Después de extraído el cerebro, se comprueba que el resto de la caja craneana está intacto. El hemisferio derecho es más ancho que el izquierdo y se achata más sobre la mesa. Extrayendo cuidadosamente el coágulo que cubre la zona rolándica, se nota que se prolonga a través del tejido encefálico hacia la profundidad. Ocupa una cavidad anfractuosa, de paredes irregulares, constituídas en algunos puntos por papilla cerebral. El resto del cerebro y el cerebro son de aspecto normal. Se vuelve a colocar el coágulo dentro de su cavidad para fijar la pieza en formol. El tamaño del hematoma era un poco mayor que el de un huevo de gallina.

Llama la atención en este caso, la magnitud de las lesiones craneo-encefálicas, con lesión simultánea de la bóveda, de las meninges y del encéfalo. Estas lesiones no se instalaron bruscamente. Lo atestigua la existencia de un período lúcido de algunas horas. No fué posible establecer el orden de aparición y la progresión de los signos focales, dado que el paciente careció de asistencia médica hasta el momento de su traslado al hospital. Cuando fué examinado por nosotros, existía y una hemiplegia izquierda asociada a una hemi-contractura derecha, con desviación conjugada de la cabeza y de los ojos hacia la derecha.

No se pudo obse[illegible] po[illegible]er sido quizá fugaz, el s[illegible]

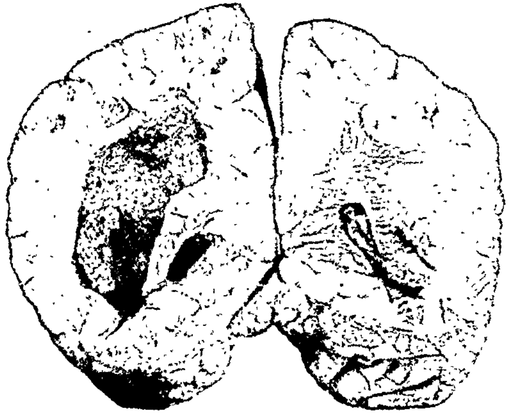

Fig. 1. Hematoma del hemisferio izquierdo. Corte transversal pasando cerca de la extremidad posterior del ventrículo lateral. Vista pósterio-anterior.

hacia la *corteza, conservando* ésta intacta su estructura neuronal (Fig. 4).

3° Las técnicas selectivas del pre-colágeno y reticulina no muestran fibrilla alguna, no habiéndose iniciado el proceso reaccional de reparación.

4° *La pared de la cavidad* es, pues, la misma substancia cerebral, congestionada, infiltrada, dilacerada en parte y recubierta por depósitos de fibrina y de sangre.

En resumen, se trata de una hemorragia intra-cerebral, parenquimatosa, localizada en el espesor de la substancia blanca, consecutiva a un traumatismo de cráneo sin fractura ni herida meníngea. La localización en el polo occipital no es la habitual de la hemorragia médica que tiene lugar en la arteria lentículo-estriada y sus ramas. El estudio microscópico revela que se trata de una hemorragia reciente, por los caracteres y el foco mismo y por la ausencia de todo fenómeno reaccional de organizacion tisular. No ha sido posible encontrar el origen del foco hemorrágico, ni se pudieron apreciar alteraciones vasculares.

TERCER CASO

Este enfermo que fué estudiado y operado por el *Dr. José P. Otero se distingue* de los otros porque siendo un hematoma más pequeño, permitió que el enfermo fuera sometido a una intervención quirúrgica con curación consecutiva.

A.P., 18 años, sufre un traumatismo directo de cráneo con hundimiento de 3 cms. de diámetro, situado en la región parietal izquierda; obnubilación; no hay signos focales. Operación: Dr. José P. Otero. Con anestesia local se extirpa el fragmento óseo hundido. No hay hematoma extradural. Incidida la dura no se constata coágulo subdural pero sí un foco de contusión cerebral. Evolución: Continúa en estadó de coma vigil con tendencia a acentuarse. En la mañana del 5° día está en coma profundo, presentan-

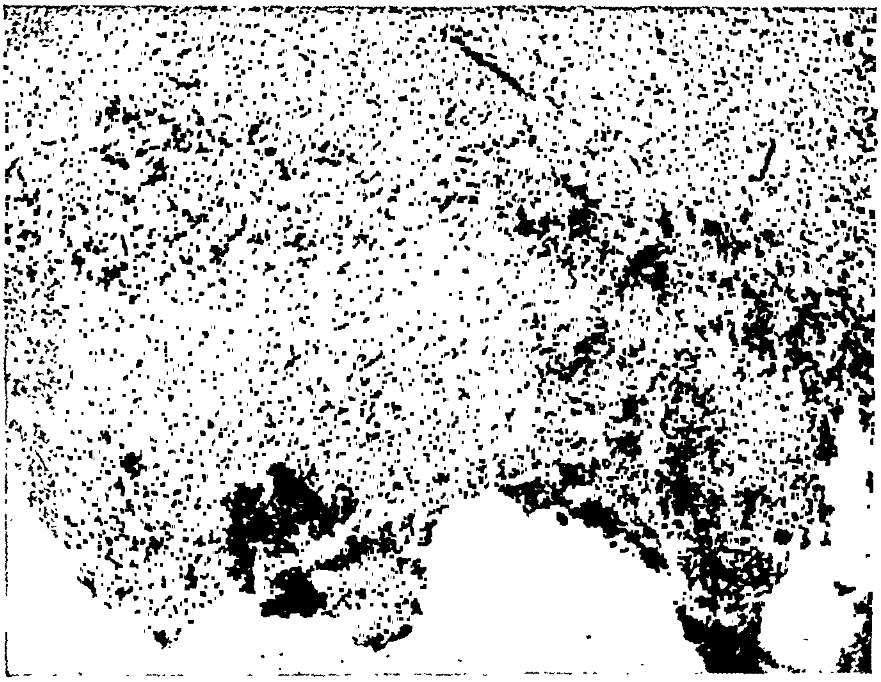

Fig. 2. Vista topográfica de la pared del hematoma. Hemorragia en capa hacia la cavidad. Hemorragia intersticial de la substancia blanca. Edema y congestión de los pequeños vasos capilares. Ausencia de organización y de cápsula de enquistamiento.

o una paresia facial y del miembro superior derecho.

Segunda operación: se abre la herida y se cortan los puntos de sutura de la duramadre. Cerebro tenso de color negruzco. Se punciona con aguja, extrayéndose sangre y sobre su trayecto se hunde el bisturí. Evacuación de coágulos y de tejido cerebral con un chorro suave de suero fisiológico inyectado por medio de una sonda de Nélaton. El hematoma, de límites imprecisos, era del tamaño de una ciruela grande. Tubo de drenaje fino. Luego siguió en coma durante varios días, pero después empezó a mejorar progresivamente. A los 2 meses de su ingreso fué dado de alta completamente curado.

Un mes más tarde lo dejamos de ver por encontrarse completamente cano, no habiendo quedado el menor déficit funcional.

No hemos podido encontrar una descripción de conjunto de la anatomía patológica de estas lesiones. Ensayaremos de ordenar su estudio, considerando:

1° Estado de las meninges y del encéfalo durante las intervenciones quirúrgicas, es decir, lo que ve el cirujano al operar un hematoma intracerebral.
2° Estudio macroscópico de los cerebros durante la necropsia.
3° Lesiones histológicas del encéfalo, de los vasos, etc.

1° Lo que se ve durante la intervención: Lauwereyns (M.J.), en una herida de bala que perforó el cerebro desde la región temporal derecha a la izquierda, encontró la duramadre temporal izquierda de color normal, pero sin latidos y al parecer tensa. Punción aspiradora que da a 25 mm. de profundidad líquido sero-hemático negruzco. Tomando como guía la aguja se hunde una sonda acanalada que deja salir 20 cc. de sangre. Poco después, el cerebro vuelve a latir.

Moulonguet (M.P.). Una bala de fusil roza la región parietal izquierda sin provocar fractura. Parálisis inmediata de la mano derecha y paresia del resto del miembro durante los días siguientes, sin pérdida de conocimiento. Trepanación: hematoma extradural de 2 cc.; duramadre rígida y tensa. Seccionada, deja ver una circunvolución cerebral edematosa, turgente, con vasos piamarianos congestionados. La punción al bisturía de esta circunvolución deja salir líquido sanguinolento con materia cerebral. Sutura de la dura. Post-operatorio normal.

Fig. 3. La misma preparación anterior. Vaso ingurgitado de glóbulos rojos y hemorragia perivascular.

Cushing: Caída de bicicleta, estado subcomatoso, hemiplegia derecha, hipertensión craneana. Trepanación a izquierda; circunvoluciones cerebrales aplanadas; se hunde una sonda a 4 cms. de profundidad, saliendo 2 cucharadas de sangre y coágulos. Mejoría inmediatá, pero deceso al 2° día.

Heusner trepanó una niña 14 días después de una caída seguida de paresia sensitivomotriz, hallando huesos intactos, duramadre tensa, cerebro tumefacto y rojizo. A 2 cms. de profundidad se encuentra líquido rojo-negruzco. El cerebro recobra su forma. Curación completa.

En el caso de Jeannel había lesión encefálica por contragolpe. Exploración infructuosa del lado del traumatismo, después del lado opuesto, en el sitio correspondiente a los signos focales. Vasos piamarianos túrgidos; punción con sonda y evacuación de un hematoma, situado debajo de una circunvolución distendida.

Biérent (M.P. en un caso de obnubilación, cefalea intensa y parálisis facial derecha, con dificultad para hablar, síntomas aparecidos recién 7 días después de una caída de bicicleta, observó en la fosa temporal derecha que la duramadre estaba tensa y no latía. La punción dió a 4 cms. de profundidad líquido hemático franco. El cerebro recobra progresivamente su aspecto normal y vuelve a latir.

Moulonguet distingue además el grupo de hematomas por penetración intracerebral ya sea por cuerpo extraño o en relación con una fractura de la bóveda. Siguiendo el trayecto de una horquilla, cae en pleno tejido encefálico sobre un hematoma del tamaño de un huevo de paloma. *En otro caso de igual etiología,* se encuentra en medio de la colección sanguínea la punta del objeto vulnerante. El hematoma puede infectarse secundariamente, previo enquistamiento (J. L. Petit, Kocher, Vibert, etc.).

La irrupción de la sangre del hematoma en los ventrículos laternales puede hacerse rápidamente, en pocas horas, o recién días o semanas después del accidente. Esto depende evidentemente de la *magnitud del derrame sanguíneo* y del estado de la pared del hematoma.

2° Estudia macroscópico del cerebro.

Caso del Prof. D. Prat (4): "Al abrir el cráneo se encuentra la superficie del hemisferio derecho, en su parte póstero-superior, *con una zona roja de sangre,* que ha proyectado las meninges y que hace saliencia al exterior. Se incinden las meninges y se extrae un coágulo que se ha exteriorizado por un orificio del hemisferio cerebral derecho y que rellena *una cavidad intra-cerebral* del tamaño de una naranja. Orificio de la corteza de 6 cms. de largo, por 2[illegible] ancho en su parte medio y 4 posterior. La cavidad es del tamaño de una naranja, redondeada, a paredes netas y secas y tiene una comunicación pequeña con ventrículo lateral derecho, que está aplastado y con un poco de sangre, traspasada de la cavidad. En el corte transversal de la cavidad se pueden comprobar las enormes dimensiones de la caverna cerebral, el gran desplazamiento hacia adentro de la pared externa del ventrículo lateral derecho y la destrucción del tejido cerebral en la parte ínfero-externa del hemisferio derecho. En el 4° centrículo hay un derrame de sangre líquida y la protuberancia está infiltrada de sangre, con focos hemorrágicos diseminados en la superficie del corte.'' Las lesiones macroscópicas observadas en nuestros casos fueron descritas más arriba.

3° Las lesiones histológicas del encéfalo en los traumatismos de cráneo fueron objecto de un estudio detallado realizado por Muller, Marchand y Mme. Marchand-Alphand (10). Según ellos predominan n el tejido nervioso hemorragias, más o menos extensas que pueden referirse fácilmente a un vaso, ya sea en la sustancia blanca o en la gris. Otras veces los vasos están como envainados en una zona hemorrágica. El tejido cerebral propiamente dicho parece sano a distancia del foco hemorrágico. Más arriba hemos expuesto detalladamente las lesiones histológicas que encontró el Br. Médoc al estudiar un cerebro con hematoma intra-cerebral de origen traumático.

Tiene naturalmente capital importancia el estudio de las paredes vasculares, pues en último término el hematoma se debe a su ruptura. Esta se producirá más fácilmente cuando hay lesiones anteriores, como ser arterio-esclerosis, ateroma, sífilis, etc.

El diagnóstico del hematoma intra-cerebral es a menudo difícil. Dada su etiología, es evidente que los otros síntomas locales y generales comunes a todos los traumatismos de cráneo complican el cuadro clínico. Dos síntomas se destacan y conducen, sobre todo cuando van asociados, con frecuencia al diagnóstico correcto:

1° Un intervalo libre relativamente corto, desde algunas horas hasta pocos días. Como excepción puede citarse el caso de Bierént, cuyo intervalo lucido duró 7 días, y el de Vibert que duró 2 meses. En nuestros 3 casos el intervalo libre fué corto, apenas de algunas horas.

2° Síntomas neurológicos de localización, caracterizados por su limitación, como ser una monoplegia aislada o asociada a una parálisis facial, o sólo parálisis facial, etc. El paciente del Dr. Otero presentaba la asociación de parálisis facial con monoplegia braquial. Otro caso nuestro tenía solamente dilatación pupilar del lado de la lesión, pero como fué visto recién en el período comatoso, ignoramos su sintomatología anterior. Además presentaba el signo de Babinski en ambos pies, a pesar de su lesión unilateral. Nuestro primer caso, también en el período comatoso, tenía hemiplegia del lado opuesto a la lesión cerebral con hemi-contractura del lado lesional.

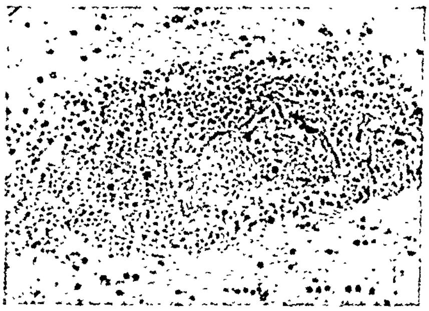

Fig. 4. Microfotografía tomada alrededor del foco hemorrágico. Arriba a la izquierda infiltración hemorrágica. Intenso edema cerebral que ha disociado las fibras de la substancia blanca.

Moulonguet hizo el estudio de varios casos de etiología, sintomatología y evolución diferentes. Llega finalmente a la conclusión, lo mismo que Prat, que cuando los signos de déficit nervioso "son muy localizados, el diagnóstico de hemorragia intracerebral es casi seguro."

Esto es cierto, indudablemente, para los hematomas pequeños. Pero cuando la colección es grande y cuando por su localización interrumpe la vía sensitivo-motriz, puede dar una hemiplegia.

Cuando los signos neurológicos son más difusos, solo puede sospecharse la existencia del hematoma, y con más razón, cuando no hay signos de localización. En estos casos se está autorizado a recurrir al encéfalografía y a la ventrículografía (Prat).

El tratamiento del hematoma intracerebral es evidentemente quirúrgico. Condiciones previas son el diagnóstico correcto y la localización lo más aproximada posible, para permitir el acceso directo al foco. Como guías más o menos fieles se tomarán los signos focales cuya interpretación es a veces difícil. En muchos casos es aconsejable pedir la colaboración del neurólogo y del oftalmólogo. Esta norma se sigue en nuestro Servicio.

Sabiendo donde está el hematoma se simplifica la intervención y se evitan punciones perjudiciales, pues éstas deben reducirse al mínimo indispensable. Cushing hizo notar el valor localizador que tiene el aplanamiento de las circunvoluciones cerebrales. Prat describe la propulsión regional a segmentaria y la resistencia mayor que ofrece el encéfalo a la palpación frente al hematoma.

Naturalmente no todos los hematomas son accesibles al tratamiento quirúrgico. Sólo las lesiones colectadas, sin otras lesiones encéfalicas importantes asociadas podrán ser evacuadas con probabilidades de éxito. El traumatizado de cráneo es un enfermo frágil que exige maniobras delicadas, realizadas con técnica depurada. Hay que saber elegir la intervención adecuada a cada enfermo.

Para los casos complejos domina una fuerte tendencia abstencionista, aún entre los neuro-cirujanos más experimentados. Cuando el hematoma está bien colectado, el resultado de la evacuación suele ser a veces espectacular, tal como sucedió en el caso de Bierent (3), donde al día siguiente habían desaparecido todos los síntomas anormales. El enfermo del Dr. J. P. Otero tardó varios días en salir del coma, pero se restableció completamente.

SUMARIO

Estudio de 3 casos de hematoma intracerebral por traumatismo de cráneo, bien colectados y localizados. Evolución favorable de un caso de hematoma pequeño, en un joven de 18 años, operado 5 días después del traumatismo. Estudia anatomo-patológico de los otros dos casos. Valor diagnóstico de los diferentes síntomas, especialmente del intervalo libre relativamente corto y de los signos neurológicos de localización. Consideraciones terapéuticas.

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RÉSUMÉ

Etude de trois cas d'hématome intracérébral par traumatisme bien collectés et localisés. Evolution favorable dans une cas de petite collect[illegible] chez [illegible] jeune

homme, opéré le 5 ième. jour. Etude anatomo-pathologique des deux autres cas. Valeur diagnostique des différents symptômes, spécialement de l'intervalle libre, rélativement court, et des signes neurologiques de localisation. Considérations thérapeutiques.

Выводы

Автор описывает три случая интрацеребральной гематомы. Анатомо-патологические данные описанны в двух, в третьем была произведенна операция у молодого пациента на пьятом дне с выздоровлением. Автор трактует о симптомах, локализации и терапии гематом мозда.

RESERVATIONS

Members of the International College of Surgeons and their friends who desire information as to hotel accommodations while attending the Fourth International Assembly in New York City, June 14-16, 1943, may write to

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On the Treatment of Peptic Ulcers (Medical and Surgical*)

MAX EINHORN, M.D., F.I.C.S. (Hon.)
NEW YORK, NEW YORK

PHYSICIANS and surgeons endeavor to alleviate human suffering. When this is possible by means not interfering with the construction of the body — both physicians and surgeons agree such methods should be carried out. If, however, such procedures are not sufficient to produce a cure, surgery steps in and frequently succeed in reestablishing health by removing diseased organs or by instituting new pathways for the continuation of the physiological needs of the organism. In this way physicians and surgeons are not competitors but rather associates in their work of helping human suffering.

In curing disease, nature utilizes repose as one of the best remedies. A rest treatment for peptic ulcer had been devised long ago by instituting rectal alimentation. This mode of healing is very rational. It is, however, often insufficient, as it cannot be kept up long enough and rectal alimentation does not permit adequate nutrition for the body.

In 1910 I began using duodenal alimentation. This method of nutrition can be maintained for a prolonged time and supplies full nutrition to the body. I, therefore, applied this mode of rest treatment of the stomach for various types of peptic ulcers, provided the pylorus is not too greatly strictured and there is *no* sufficient probability of dealing with a malignant process.

Ulcers with large niches often can be made to disappear by this method of treatment in two or three weeks. If, however, there should be no improvement in two or three weeks, the niche not showing a tendency to healing, there is some suspicion of malignancy and then operation is indicated. Again, if the ulcer is near the pylorus and there is lack of hydrochloric acid or the presence of lactic acid with beginning food stagnation, operation is indicated. An ulcer, even on the duodenal side near the pylorus, which has led to considerable obstruction and food stagnation, is also an indication for operative intervention.

SUMMARY

The author advises duodenal alimentation in the treatment of peptic ulcers. With this method of treatment he has had ulcers with large niches disappear in two or three weeks. If the ulcers show no tendency toward healing under this treatment, there is some suspicion of malignancy and operation is indicated. Other indications for operation are if the ulcer is near the pylorus and there is lack of hydrochloric acid or the presence of lactic acid with beginning food stagnation, or an ulcer on the duodenal side with considerable obstruction and food stagnation.

SUMARIO

El autor aconseja la alimentación duodenal en el tratamiento de las úlceras pépticas. Con este método úlceras con nichos grandes desaparecen en dos o tres

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*Presented at the Third International Assembly of the International College of Surgeons held in Mexico City, August, 1941.

semanas. En los casos en que no se obtiene mejoría bajo este tratamiento el cáncer se debe de sospechar y, por esta razon, la cirugía es indicada. La cirugía también es indicada en todos los casos que presentan una úlcera en la vecindad del píloro con ausencia del ácido láctico y evidencia de estagnación; o casos de úlcera duodenal con manifestaciones de obstrucción y estagnación ya considerables.

RÉSUMÉ

L'auteur recommande l'augmentation duodénal dans le traitemente de l'ulcère peptique. Il a obtenu la disparition avec ce traitemente de l'ulcère, de grandes niches, dans le cours de deux à trois semaines si l'ulcère soumis à ce traitemente ne montre aucune tendance à la guerrison, il faut soupçonner le cancer et l'opération est indiquée. Il faut aussi opérer si l'ulcère est près du pylore et s'il y a une déficience d'acide lactique avec un commencement de stagnation des aliments ou dans le cas d'ulcère duodenal avec obstruction considèrable et stagnation des aliments.

Выводы

Автор советует дуоденальное кормление в лечении пептических язв. Язвы с большой нишей заживали в течении двух или трех недель. Если язва при таком лечении не заживает, то нужно подозревать злокачественное перерождение и подвергнуть пациента к операции.

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Ptosis Vesicular Consecutiva a Colecistitis Obstructiva

ENRIQUE LOUP B., M.D., F.A.C.S., F.I.C.S.
LA PAZ, BOLIVIA

SUMMARY

Among the consequences of obstructive cholecystitis are hydrops, empyema, gangrene and perforation, and also vesicular rupture.

If the obstruction is permanent and the hydrops increase without vascular lesions on the vesicular tunica, the result will be dilatation and enlargement and as a result, an increase in weight as the gall bladder exercises traction on the suspensory apparatus, and attachment *to the liver which assumes the form* of an elongated tongue-like projection, resulting from the migration of the gall bladder, which may occur as far as the iliac fossae. Another factor contributing to a dislocation of the gall bladder and to maintaining it outside its proper location, is the process of adhesions.

The change of location of the gall bladder by obscuring the symptoms may result in diagnostic errors, which occasionally delays the proper location, is the process of adhesions.

The change of location of the gall bladder by obscuring the symptoms may result in diagnostic errors, which occasionally delays the proper time for surgical intervention.

Clinical cases of this clinical condition are presented.

La obstrucción generalmente calculosa del conducto cístico, al producir una retención persistente del contenido vesicular, origina toda una gama de alteraciones que en lo relativo al contenido puedan ir desde el acúmulo de bilis densa, verdi-negra, hasta el empiema, pasando por la hidropesía; y en cuanto al continente, desde la simple distensión, hasta la gangrena y la perforación.

Toda esa diversidad de lesiones es atribuída comunmente a que si la bilis contenía gérmenes patógenos o no; pero mayor importancia parece que desempeña el estado en que se encuentren las paredes vesiculares, al producirse la obstrucción. Así, supuesta una repentina clausura del cístico por un cálculo, en una vesículo aún no alterada, el poder de absorción de sus linfáticos entrará en juego y pronto en vez de bilis se encontrará el líquido claro mucoide que constituye el hidrops vesicular. Si ocurre después un proceso de transudación en virtud del cual el contenido líquido continúa aumentando, las paredes vesiculares, cuyas túnicas conservan su constitución anatómica, responderán con la distensión y el engrosamiento hasta el grado a que vamos a hacer referencia.

Si imaginamos, en cambio, una vesícula de túnicas alteradas, ya por la acción de una bilis demasiado concentrada o por ser presa de una infección microbiana como se acepta por lo general, los disturbios circulatorios no tardarán en aparecer: infarto hemorrágico, patacones de gangrena, adelgazamiento, hasta acabar en la perforación, lo que a su vez originará la colección enquistada si el proceso defensivo tuvo tiempo para formar adherencias, o lo peritonitis generalizada en caso contrario.

Todo esto ha sido ya estudiado y se tiene claramente establecido. Empero, hay aun otra consecuencia de la obstrucción vesicular, que no por ser menos frecuente debe dejarse sin mención, ya que cobra inesperada importancia desde el punto de vista clínico. Nos referimos al cambio de locación que suele sufrir el reservorio biliar, arrastrando consigo al hígado mismo.

Volvamos a la vesícula cuyo aporte circulatorio y cuyas paredes se mantienen todavía inalteradas, pero en cuya cavidad moran cálculos. Imaginemos que al ser arrastradas por la corriente biliar, repentinamente una de esas piedrecillas es queda enclavada en el lúmen cístico. Tendremos la obstrucción producida e naugurada la sucesión de fenómenos en virtud de los cuales se va a producir la hidropesía. Probablemente cuando las cosas van a ocurrir como estamos supo-

que por obra de tal aumento, la vesícula se distenderá siguiendo a ello el engrosamiento de sus paredes, todo lo cual traerá como consecuencia el mayor peso. Ahora bien, volúmen y peso aumentados, se traducen por tracción ejercida sobre los médios de fijeza de la vesícula al hígado, los que a la larga se distienden en cierta extensión. Empero, como tal envoltura peritoneal que mantiene aplicada la vesícula contra el surco de la cara póstero-inferior del hígado es breve, y además poco laxo y escaso el tejido intermedio, ocurrirá que quién ceda más sea el propio hígado, que en forma de una delgada lengüeta, descienda acompañando a la vesícula distendida, hasta muy abajo. Testimonio de esta migración constituyen las diferentes faces de descenso en que hemos encontrado a la vesícula crónicamente obstruída. En los comienzos, solamente la inicial dilatación con distención; más tarde la relajación acentuada del meso, del que ya cuelga la vesícula, lo que nos permite hacerla bascular con amplitud al practicar la colecistectomía; después, en una fase avanzada, el abandono del cuadrante súpero-

Como el tratamiento, sobre todo desde el punto de vista del momento en que se ha de intervenir, está subordinado al diagnóstico, resulta de innegable importancia el poder deslindar una nueva causa de error.

Veamos un caso clínico:

El día 26 de mayo de 1942 un jóven colega me pedía una cama en mi sala del hospital, para una paciente suya que requería ser operada de un *absceso apendicular* El ataque había comenzado cuatro días atrás; pero ahora que ya el proceso estaba tabicado, creía oportuna la evacuación.

A poco traían a la enferma. Era ésta una mujer de 45 años de edad, algo enflaquecida, que se quejaba de dolor al lado derecho del vientre. Referíanos que su padecimiento había comenzado el día 22 acompañado de vómitos alimenticios y biliares. En un principio la zona afectada habría sido la epigástrica, invadiendo a la derecha y abajo, hasta hacerse francamente acusada en el punto que señalaba, ahora, *la fosa ilíaca derecha.* Al día siguiente, ella misma se habría administrado un purgante, lo que empeoró la situación. Se acusó la fiebre, con diferencia del grado entre la temperatura axilar y rectal, habiendo llegado a 39° y 40° respectivamente. A decir verdad su facies no parecía traslucir suma ansiedad. El pulso era de 105 y la temperatura de 38,4. Su abdómen era el de una multípara, blando y depresible al lado izquierdo, lo que contrastaba con la contractura que aún a la vista se acusaba en el músculo recto derecho La fosa ilíaca derecha era asiento del máximo dolor. Bastaba posar la mano allí, para que se acusara la defensa. No obstante, palpando con suavidad, podía apreciarse una tumefacción uniforme, lisa, renitente y redondeada, claramente circunscrita hacia abajo, en tanto que perdíase difusamente hacia arriba. Repetimos, en toda esa zona había defensa muscular, pero indudablemente ésta era más pronunciada en el cuadrante inferior derecho. Por lo demás, no había meteorismo que distendiera el abdómen.

El diagnóstico de *"apendicitis"; "absceso apendicular,"* estaba establecido con demasiada fijeza en la mente colega para admitir otros exámenes que podrían acarrear mayores dilaciones. Sin embargo se hizo la cuenta de glóbulos blancos que arrojó la cifra de 7.500.

Decidida la operación, se la llevó a cabo con anestesia raquídea, que proporcionó un magnífico silencio abdominal. Abrió el vientre el colega cón una pequeña incisión de McBurney. Mas ingrata fué la sorpresa al no ver que fluyera pus cuando incindió el peritoneo. Lo que allí se presentaba era una tumoración de consistencia quística, que no vacilamos en identificar como el hígado Era en efecto una delgada lengüeta de tejido hepático, que recubria un gran cuerpo ovoide, tamaño de una bergamota, conteniéndo líquido a gran tensión: *era una vesícula hidrópica!* Continuada la operación desde ese momento por nosotros, ante todo se desaguó la vesícula extrayendo 885 g. de "bilis blanca." Se siguió practicando la colecistectomía retrógrada como de ordinario. La vesícula mostraba sus paredes considerablemente engrosadas; el cístico lo estaba también.

La marcha post-opertoria fué sin el menor incidente.

El análisis del líquido extraído de la vesícula biliar dió el siguiente resultado. "presencia de albúmina; abundantes glóbulos blancos y piocitos; algunos glóbulos rojos; bacilos Gram-negativo; bacilos tipo Coli."

El informe del laboratorio histopatológico decía: "Vesícula de paredes engrosadas, siendo su mayor espesor de 13 mm. Túnica mucosa · el epitelio recubierto de líquido seroso, está formado de células cilíndricas altas, de protoplasm homogéneo, de núcleos basales. No existe epitelio en las porciones ulceradas de la mucosa, las cuales se presentan en algunas zonas. La lámina propia en algunos sitios presenta los signos de un proceso inflamatorio crónico, con infiltración linfocito-plasmocitaria discreta, y en otros de una inflamación aguda con vasodilatación considerable; infiltación polimorfo-nuclear abundante y micro-abscesos. Túnica fibromuscular: engrosada, desdibujada, siendo irreconocibles sus elementos típicos, y afecta de degeneración múltiple: hialina, mixoide, fibrinoide, etc. En esta túnica se encuentran también los signos de un proceso inflamatorio adudo con los mismos elementos descritos [illegible] ropia de la mucosa. En resúr [illegible] redes crónicamente infla [illegible] habiendo sobrevenido en ellas, secundariamente, una inflamación aguda de tendencia supurativa.'' (Dr. José S. Arévalo.)

Poco antes de abandonar la paciente el hospital, se comprobó rentgenológicamente, lo que ya la percusión demostraba respecto al hígado, que se hallaba en sus límites normales. Finalmente, la paciente fué dada de alta en muy buen estado de salud.

Como se vé, a no mediar la ectopia, esto es el traslado a otro escenario del principal actuante, el diagnóstico se habría establecido correctamente desde un *principio. Ataque de dolor agudo al epigastrio*, acompañado de vómitos; dolor que invade luego y se fija en la vesícula, habría sido claro. Sólo que la vesícula, en vez de hallarse en su sitio, en el cuadrante súpero-lateral, fué a ocupar el del apéndice en la fosa ilíaca derecha! La presencia de la tumoración quística, debajo de una zona de dolor y resistencia muscular, habría llevado a la mente la des de un empiema o más probablemente una hidropsía, dada la cifra de 7.500 ucocitos, siempre que la tumoración se hubiese encontrado debajo del reborde costal derecho.

Ciertamente que para interpretarse como un absceso apendicular, que habría fensa muscular para mantener disimulada la continuidad con el hígado que constituiría el dato de seguridad.

Así un segundo ejemplo:

El 14 de septiembre admitía en mi servicio a la paciente C.C.Z., mestiza de 43 años, que contaba la historia de una larga peregrinación por consultorios y dispensarios hasta que ya agotadas sus fuerzas, vino a hospitalizarse. Su padecimiento principal databa de un mes atrás y consistía en un dolor constante en la región del flanco derecho, irradiando a la zona dorso-lumbar; junto con el dolor, había notado la presencia de una tumoración, y como a veces el dolor se exacerbaba con las comidas, fué acostumbrándose a una alimentación muy ligera. En realidad, había anorexia y adinamia. Como antecedentes, refería la paciente que había tenido varias veces ataques de dolor epigástrico, acompañados de vómitos biliosos.

El exámen revelaba ante toda postración, enflaquecimiento, depresión. Pulso 110. Tension arterial 7½ por 6½. En el abdomen aplanado, hacia el flanco derecho, debajo del reborde costal, notábase una tumefacción, indolora, elástica, lisa, redondeada, que no se desplazaba con los movimientos respiratorios y en cambio sí aunque ligeramente, en sentido lateral. La tumoración se perdía insensiblemente hacia la derecha y abajo. En el epigastrio y región del cuadrante súperojaba, radicando en el flanco derecho debajo del reborde costal, donde había una tumoración redondeada y elástica; comprobando todavía que en el epigastrio y cuadrante súpero-lateral derecho la palpación descubría dolor y resistencia muscular, y añadiendo por último la subictericia de las conjuntivas, con presencia en la orina de pigmentos y ácidos biliares, el diagnóstico de una *colecistitis obstructiva con* su *hidrops consecutivo* no parecía ser ataques, probablemente lo que ocurrió hace algo más de un mes fué que se obstruyó el cístico. Desde entonces el dolor se estableció persistentemente e iba haciéndose notoria la tumoración. Mas, y he aquí en juego la cuestión topográfica, la *su puesta vesícula hidrópica distaba mucho de estar en la zona vesicular.* Y así era en efecto. Estaba demasiado a la derecha y abajo, y todavía no seguía los movimientos respiratorios, ni se continuaba con la matidez hepática, existiendo interpuesta una zona de timpanismo. Por ello, pensaron otros en riñón ectópico.

En fin, con el diagnóstico presuntivo de hidrops vesicular, decidimos la *operación,* la que fué efectuada con anestesia local. La tumoración no era otra cosa que una vesícula biliar que moraba muy abajo y a la derecha, estando sujeta por su fondo a una ancha brida al epiplón. Su volúmen era el doble del ordinario y su espesor tres veces más. Contenía unos 250 g. de "bilis blanca" cargada de mucus, y numerosos cálculos de distintos tamaños. En la zona del colédoco, aun cerca de su desembocadura, había engrosamiento manifiesto. Se dejó un tubo en el canal. En cuanto al hígado una delgada lengüeta había acompañado a la vesícula en su descenso.

Si bien, como se vé una parte del diagnóstico quedaba confirmada, había otra respecto a la cual el exámen histopatológico nos reservaba una sorpresa. He aquí el informe del Dr. José S. Arévalo: "En el fondo vesicular, hay un proceso inflamatorio; vasodilatación y fenómenos de diapedesis leucocitaria. En el bacinete, en la túnica fibro-muscular y parte de la mucosa, hay una neoplasia maligna. El protoplasma contiene lipoides (colesterina); infiltración moderada de linfocitos. Placas de necrobiosis recorren la neoplasia en todos sentidos. En resumen, *cáncer de la vesícula biliar.*"

Así se explicaba la adinamia, el enflaquecimiento, la anorexia y la hipotensión.

Fuera de los casos, como los descritos, con integridad de las paredes vesiculares, pueden también darse otros de *perforación con formación de abscesos* pericolecísticos que se manifiestan en zonas distantes de la propia habitual. Si una vesícula hidrópica, en virtud de su aumento de peso y volúmen, ha llegado a descender hasta un sitio que no es el suyo, y si en tal estado la infección transforma en pus su contenido, y la alteración de sus paredes acaba por dar paso a la perforación, el absceso, con todas las apariencias de una tumoración quística, podrá también prestarse a interpretaciones arróneas.

Podríamos citar entre otros el caso de un individuo de 60 años, dispéptico de mucho tiempo atrás, que repentinamente se sintió acometido por violentos dolores y vómitos. Los dolores que comenzaron en la zona epigástrica, invadieron luego y acabaron por fijarse en la región apendicular. Sitio de dolor máximo y presencia de una tumoración, era un punto en el borde derecho del músculo recto, al nivel de la espina ilíaca antero-superior. Por supuesto que en el lugar de emergencia, en que prestaron al enfermo los primeros auxilios, se estableció el diagnóstico de apendicitis. La intervención comprobó la existencia de un gran absceso, muy bien emparedado, que tenía por techo una lengüeta de tejido hepático y que como testimonio de su orígen exhibió una decena de cálculos de colesterina y bilirrubinato de cal.

Entre los doce casos de perforación con formación de absceso de nuestra última serie tenemos cuatro casos en que el tumor fluctuante o remitente se encontraba fuera del lugar normalmente ocupado por la vesícula biliar. Menos mal que en casos semejantes, el error diagnóstico no tenga, desde el punto de vista del tratamiento, una importancia fundamental. No así en las otras posibilidades como las primero descritas, motivo por el cual creemos que entre las complicaciones a que dan lugar las colecistitis obstructivas, debe tenerse en cuenta ésta de la ectopia vesicular.

RESUMEN

Entre las consecuencias de una colecistitis obstructiva: hidrops, empiema, gangrena y perforación, cabe también tener en cuenta la ectopia vesicular.

Si la obstrucción es permanente y el hidrops aumenta, no habiendo lesiones vasculares en las túnicas de la vesícula, la respuesta será dilatación y engrosamiento y como consecuencia aumento de peso. Solicitada por el mayor peso, la *vesícula ejerce tracción a sus medios de* fijeza y por su intermedio al hígado, que en forma de una delgada lengüeta se distenderá, acompañando a la vesícula en su migración, que puede llegar hasta la fosa ilíaca. Otro factor que contribuye a desviar a la vesícula y a mantenerla fuera de su lugar, es el proceso de adherencias.

El cambio de locación de la vesícula, al desfigurar los síntomas puede inducir a errores de diagnóstico, que perjudiquen la oportunidad de una intervención.

Se refieren como ejemplo, algunos casos clinicos.

BIBLIOGRAFIA

RÉSUMÉ

Parmi les conséquences de cholecystite on mentionne l'hydropsie, l'empyème, la gangrène, la perforation et aussi la rupture de la vésicle. Si l'obstruction est permanente et que l'hydropsie augmente sans lésions vasculaires de la tunique vesiculaire, il en résultera une dilatation et un aggrandissement entraînant une augmentation du poids de la vésicule bilaire. De ceci résulte une traction sur l'appareil suspensoir de l'organe. Il peut en résulter une descente de la vésicule biliaire jusque dans la fosse iliaque une vraie dislocation de la vésicule. Des adhérences parfois s'ensuivent. Des erreurs de diagnostic peuvent déterminer des retards malheureux pour une opération en temps opportun. Des cas cliniques sont rapportés et analysés.

Выводы

В результате обструктивного холецистита может получиться гидропс, емпиема, гангрена и прободение пузыря. При постоянной обструкции, если гидропс увеличивается без сосудистых измерений в тунике желчного пузыря, то в результате получается расширение и увеличение органа. Оттяготевший орган вытягивается в виде продолговатого язычка и может опуститься даже в подвздошную область. Процес сращений также способствует передвижению органа. Эта новая локализация пузыря способна дать повод к неправильному диагнозу.

Другия показания коперации близость язвы к привратнику, отсутствие молочной кислоты, при начинающемся застое или же дуоденальная язва с застоем.

Editorials

The Fourth International Assembly of the International College of Surgeons

THE Fourth International Assembly of the International College of Surgeons, to be held in conjunction with the Eighth National Assembly of its United States Chapter, assumes peculiar significance in this, the second year of our participation in World War II. Members are urgently requested to attend in spite of added transportation difficulties and added duties imposed by wartime conditions.

Representatives of our Good Neighbors, the South and Central American Republics, will be present, both as speakers and delegates, to contribute to the success of the War Surgery and Rehabilitation Program, which is of such vital concern today to each and every surgeon, whether in military service or civilian practice. A symposium on War Surgery headed by the Mexican delegation should prove of especial interest.

Upon all, men in general practice as well as the surgeon, will fall the tremendous task of treating the injuries sustained by the men of our armed forces and rehabilitating the wounded. War today is global in extent. We are fighting from the Arctic to the Tropics. Medically speaking, there is no battle front. Soldiers injured in Alaska are brought by plane to hospitals in Seattle. Men wounded in Africa wake up twenty-four hours later in the United States—the base hospital separated from the front by an entire ocean. Cooperation between the civilian and military surgeon is of greater importance than ever before.

Surgical and medical principles remain the same in peacetime and war—only the conditions under which they are practiced vary. Knowledge gained in control of pain, hemorrhage, shock and prevention of infection, the greatest problems to be met at the Front, is equally valuable to the surgeon in his own operating room. Statistics of accidents sustained during the First Army Maneuvers of October-November, 1941, revealed that 38.6 per cent of the accidents and 83.9 per cent of all deaths were due to motor vehicles—certainly not a uniquely military problem.

Advances made in wartime in first aid, gas poisoning, chemotherapy, transportation of the wounded, burns, anesthesia, eye injuries, shock and hemorrhage, skeletal, internal, brain, vascular and nerve injuries remain to benefit mankind long after the holocaust of war has passed. It therefore behooves every surgeon to acquaint himself with the progress being made.

An adequate rehabilitation program for our injured must be assured now in order that as many as possible of our fighting men may be returned to a useful place in society. The establishment of specialized institutions, such as the

Hines Memorial Hospital at Maywood, Ill., for war veterans following World War I was a step in this direction. However, many more of the mentally and physically disabled remained the problem of men in general practice.

The Assembly Rehabilitation Program covers such widely divergent topics as Plastic and Reconstruction Surgery, Reconstruction Surgery of the Bones and Joints, Physical Therapy and Chronic Diseases Due to War.

Scientific exhibits, which will be presented by various national and state organizations, should prove especially instructive. The New Jersey Rehabilitation Commission will present its curative workshop: bibliotherapy, occupational and physical therapy will be illustrated by the Veterans Administration of Washington, D. C. The Universal School of Handicrafts will present findings in creative rehabilitative activities. An Emergency Field Hospital should interest both civilian and military surgeons.

The imposing list of speakers will make the Assembly of 1943 memorable for all surgeons who wish to acquaint themselves with War Surgery and Rehabilitation. The program has been endorsed by Surgeon General Ross T. McIntire of the United States Navy and Surgeon General James T. Magee of the United States Army, who will be present if their duties permit.

M. T.

A Forgotten Co-Founder of the American Red Cross

THE International Red Cross was created at a congress of delegates held at Geneva, Switzerland, in 1863. In 1868, most of the nations of the world had ratified the principles of the International Red Cross. Although the American Government did not participate officially at Geneva, ratification of the treaty of the International Red Cross by the United States took place on March 16, 1882, due to the efforts of Miss Clara Barton (1821-1912) of Massachusetts. Miss Barton, who devoted her long life to the Red Cross movement, was responsible for the acceptance of the "American Amendment," which established the custom of rendering aid, not only in war time, but also in peace time catastrophes. She was also the founder of the First Aid Department of the American Red Cross. While president of the American Red Cross (1881-1904), Miss Barton combined field work with the work of administration. She possessed great vitality, love for the suffering, clear vision, statesmanship and leadership.

Miss Barton is usually considered the founder of the American Red Cross. However, a number of well known writers state that Adolphus S. Solomons was a co-founder of the organization, with Miss Barton. Mr. Solomons (1826-1910), a native of New York City, moved to Washington, D. C., where he became one of the most distinguished citizens of the capital, a friend of the presidents from Lincoln to Theodore Roosevelt, and a philanthropist of note. It is stated that the organization of the Associated Charities was projected at a meeting held in Solomons' home in April, 1881, and a month later, at another meeting in the same place, the American Association of the Red Cross was organized. Solomons served for twenty years as a vice-president and at one time was its treasurer.

David R. Barlee wrote in the *Washington Post,* March 13, 1932, "Mr. Solomons was the moving or motivating spirit of the enterprise . . . He was constantly giving support to various organizations formed for the relief of mankind . . . When Clara Barton launched the first Red Cross Society, Mr. Solomons was at her right hand and his name was signed to the application for the first charter."

In 1884, President Arthur appointed Miss Clara Barton, Hon. Adolphus S. Solomons and Judge Joseph Sheldon to represent the United States at the International Red Cross Congress in Geneva. Mr. Solomons was elected vice-president of the Congress and addressed the Congress in behalf of America. His experience, influence and efforts materially helped in advancing the influence of this, the most humanitarian organization in the world.

At the time of the Spanish-American war, the American National Relief Committee was established in New York City. Mr. Solomons was active in the organization, was elected one of the five original members of the New York Executive Board, and served as a member of the Supply Committee.

At the beginning of the twentieth century, he helped to settle a controversy that arose in the American Red Cross. He was one of twelve citizens who presented a petition to the 57th Congress in 1903, asking for reorganization of the American Red Cross. As a result, the Society was put on a sound financial basis and the President of the United States was made the President of the American Red Cross.

Miss Barton, one of the greatest of American women, worked tirelessly to help the sufferers in war and in peace time. Her name will be remembered as a benefactor of mankind. Together with her, credit should also be given to Adolphus S. Solomons, a great American philanthropist and communal leader, who helped to bring the American Red Cross to its present service and success.

S. R. Kagan, M.D.

The March of Time in Surgical Organizations

THE first legal status of surgery was suggested in Babylon 2200 years before Christ when Hammurabi drew up a code regulating the exact fees that a surgeon was to receive for certain operations. In 931 A.D., the Caliph appointed Humaid as Court Physician to establish the first Board of Examiners and issued a Royal Degree forbidding the practice of medicine except by those authorized by the Board.

In 1224, Emperor Frederick II signed an edict requiring the study of logic for three years, medicine and surgery for five years and assistantship to a physician for one year before examination to practice medicine. To practice surgery, the candidate returned to medical school for an additional year of study in anatomy and surgery, then served one year as apprentice to a surgeon, before being examined in surgery. During the sixteenth and seventeenth centuries, university students received their bachelor and master degrees in seven years, after which time they might register in a professional school of theology, medicine or law for another four to seven years' training.

In the seventeenth century the earliest experimental work began when Giuseppe Zambeccari, in 1680, performed on dogs most of the abdominal operations we perform today on humans. The experimental surgery of John Hunter, Lord Lister and W. S. Halsted made surgery an exact science.

Duke Federigo Cesi in 1601 organized the Academia dei Lincei in Rome. The Academia del Cimento of Florence was organized in 1657 by nine scientists, who gave ten years of united effort to experimentation and published their results as a single individual. The Royal Society in England was founded in 1662 for the purpose of reporting experimental work. These organizations were followed by the Royal Academy of Science in France, 1666, the Berlin Academy of Science, 700, the American Philosophical So-ty, 1743, and the National Academy Science, 1863. Scientific societies devoted to surgery had their beginning with the Royal College of Surgeons, 1610, the French Academy of Surgery, 1731, the Mexican Academy of Surgery, 1735, the Italian Academy of Surgery, 1780, and the American Surgical Association in 1879.

The first International Congress of Medicine was held in Paris in 1867. The function of the scientific society in the seventeenth century was twofold: (1) the creation of laboratories and encouragement of original work; (2) the publishing of periodic news of work done by scientists under its auspices and the work of other learned men. During the past two hundred years, scientific societies have been the watchdogs of the universities; they have dictated the minimum standards of undergraduate, graduate and postgraduate requirements for degrees. The value of research in the quality of teaching in medical schools has been definitely shown. (Casey—Science, July 31, 1942.)

In 1875 at Belleview Hospital, Abraham Jacobi sowed the seed of scientific medicine in the mind of a young intern, William Henry Welch, who became the Father of Scientific Medicine in America. Welch as a young scientist realized the great value of the scientific societies and through his original contributions and those of his graduate students lived to see America become the medical Mecca of the World. This was achieved by the creation of laboratories, libraries, clinics and scientific societies. Professor Welch in his Presidential Addresses before the American Medical Association, the American Association for the Advancement of Science, the American Association of Pathologists and Bacteriologists and the Association of American Physicians, created the scientific spirit which we must preserve.

While Rock Sleyster was President of the American Medical Association and a member of the Board of Regents of the American College of Physicians he brought together for the first time the Board of Trustees of the American Medical Association and the Board of Regents of the American College of Surgeons, for a common understanding in the division of the work necessary to maintain the medical profession at its highest level.

The future welfare of the young surgeon in the Armed Forces of the United Nations has received proper recognition by the International College of Surgeons through the appointment of a Faculty in 1942 for postgraduate teaching in each of the Allied Countries. The objective of the International College of Surgeons, written in 1935, to "make provision for postgraduate study through the International Credentials of the College" and to *arrange* "with *medical* schools and teaching hospitals for postgraduate study courses," aspires to cooperate with all other existing Colleges and surgical *organizations.*

In 1943, the American Medical Association, the American College of Surgeons and the American College of Physicians joined hands in this important work under the direction of Drs. Alfred Blalock, A.C.S., W. B. Breed, A.C.P., and E. L. Bortz, A.M.A., *Chairman.*

World War II is a challenge to education. The responsibility is ours; it is evident that we will again have the pseudo-specialist, and only through a *sane* leadership will humanity receive the benefits of scientific endeavor and a country worthy of the name Democracy. We shall do our best work, only if we learn to work with other countries rather than to *impose our ideas* upon them, recognizing fully their different cultural levels and traditions.

With the accelerated program of teaching we should consider whether it will not be a miscarriage of justice to reduce the undergraduate training of doctors below six calendar years.

W. J. Carson, M.D.

VISIT THE SCIENTIFIC AND COMMERCIAL EXHIBITS

Fourth International Assembly

International College of Surgeons

Waldorf-Astoria Hotel

June 14-16, 1943

Chapter Activities

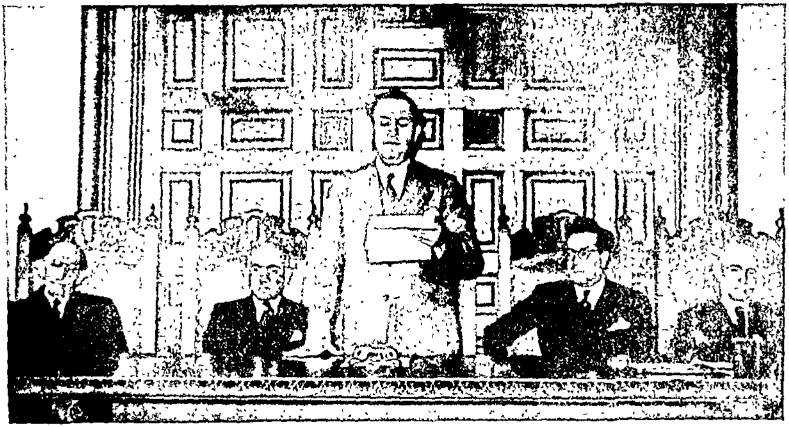
Mexican Chapter Entertains President of the Republic of Costa Rica

His Excellency Señor Doctor Don Rafael Angel Calderón Guardia, F.I.C.S. (Hon.) President of the Republic of Costa Rica, National Regent and Honorary President of the Costa Rican Chapter of the International College of Surgeons.

Gonzalo Castañeda, F.I.C.S. (Hon.), National President and Regent, Miguel López Esnaurrízar, F.I.C.S. (Hon.), National Regent, Francisco Fonseca García, F.I.C.S. (Hon.), National Secretary, arranged an extraordinary session of the Mexican Chapter for their distinguished guest. The session was held on March 9 at 3:00 P.M. in the *Salon de Actos* of the Faculty of Medicine of the National University of Medicine of Mexico.

Dr. Don Gustavo Argil, Director of the Faculty of Medicine of the National University, delivered the address of welcome. Dr. Don Gonzalo Castañeda, President of the Mexican Chapter of the International College of Surgeons, gave the official address. Dr. Don Víctor Fernández Manero, F.I.C.S. (Hon. Causa), Chief of the Department of Public Health of Mexico, participated. Following the addresses, a reception was tendered the distinguished guest in the *salons* of the Casino Militar. A number of dignitaries attended this function.

Academicians, Fellows and Members of the Mexican Chapter of the International College of Surgeons and numerous invited guests filled the *Salon de Actos* to capacity. Guests besides those mentioned included Doctor Don Mario Quiñones H., who represented Doctor Don Víctor Fernández Manero, Lic. Don Alberto Echandi Montero, Secretary of Foreign Relations of the Republic of Costa Rica, Don Carlos Jinesta Muñoz, Minister of Costa Rica in Mexico; Lic. Don Mariano Armendáriz del Castillo, Chief of Protocols of the Secretariat of



Doctor Don Rafael Angel Calderón Guardia, President of the Republic of Costa Rica, National Regent and Honorary President of the Costa Rican Chapter of the International College of Surgeons, reading his discourse. At his right are Doctor Mario Quiñones H., representing Doctor Don Víctor Fernández Manero, Chief of the Department of Public Health and Doctor Don Gonzalo Castañeda, President of the Mexican Chapter of the International College of Surgeons; at the left are seen Doctor Don Gustavo Argil, Director of the Faculty of Medicine of the National University of Mexico, and Lic. Don Alberto Echandi Montero, Secretary of Foreign Relations of the Republic of Costa Rica.

Foreign Relations in Mexico, and Doctor Don Darío Fernández Fierro, Vice-president of the Mexican Chapter of the International College of Surgeons.

Sesión Extraordinaria del Capítulo Mexicano en Honor del Presidente de la República de Costa Rica

El Capítulo Mexicano del Colegio Internacional de Cirujanos, efectuó una sesión extraordinaria en el Salón de Actos de la Facultad de Medicina, Universidad Nacional de México, a las 15 horas del día 9 de marzo, para honrar al Señor Doctor Don Rafael Calderón Guardia, F.I.C.S. (Hon.) Presidente de la República de Costa Rica, Regente Nacional y Presidente Honorario del Capítulo Costarricense del Colegio, de visita en la capital mexicana por invitación oficial del Señor General de División Don Manuel Avila Camacho, F.I.C.S. Honoris Causa, Presidente de los Estados Unidos Mexicanos.

El severa Salón de Actos de la Facultad se encontraba totalmente lleno por una selecta concurrencia, ocupando los sitiales académicos los distinguidos colegas del Capítulo Mexicano y diversos invitados de honor, y en el estrado los siguientes señores: Doctor Don Rafael Angel Calderón Guardia, a quién se brindó la presidencia del acto; Doctor Don Mario Quiñones H., en representación del Doctor Don Víctor Fernández Manero, F.I.C.S. Honoris Causa, Jefe del Departamento de Salubridad Pública; Doctor Don Gustavo Argil, Director de la Facultad de Medicina; Licenciado Don Alberto Echandi Montero, Secretario de Relaciones Exteriores de la República de Costa Rica; Doctor Don Manuel A. Manzanilla, Vicepresidente del Colegio Internacional de Cirujanos; Doctor Don Gonzalo Castañeda, Presidente del Capítulo Mexicano; Doctor Don Francisco Fonseca García, Secretario del Capítulo Mexicano. Asimismo, en sitiales inmediatos al estrado los siguientes señores: Don Carlos Jinesta Múñoz, Ministro de Costa Rica en México; [illegible] Don Mariano Armendáriz del [illegible] Protocolo de la Secret[illegible]

teriores de México; Doctor Don Miguel López Esnaurrízar, Regente Nacional del Capítulo Mexicano; Doctor Don Darío Fernández Fierro, Vicepresidente del Capítulo Mexicano.

Al abrirse la sesión, el Señor Doctor Don Gustavo Argil, Director de la Facultad de Medicina, dió la bienvenida en la forma siguiente:

Señor Presidente y distinguido colega:

Bienvenido sea Usted a esta casa, a la que debe penetrar como a su propia Escuela. En este recinto palpita la tradición universitaria más antigua del continente americano. El Real Colegio de Cirugía legó a esta Escuela de Medicina el timbre histórico de primate ilustre, pero la obra de la raza, choque y floración magnífica, es riqueza común en el abolengo fraternal de nuestra América.

Uno de mis primeros actos como Director fué incorporar a su Alma Mater, nuestra Escuela de Medicina, al Capítulo Mexicano del Colegio Internacional de Cirujanos, y uno de los actos más imperecederos de mi gestión será el de hoy, en que Usted, miembro eminente del Colegio, viene a esta casa que es vuestra y la honra con su presencia. Esta ceremonia del Capítulo Mexicano del Colegio impulsa la fraternidad y recuerda, en medio de la homicida violencia que sufre el mundo, nuestro tronco común y nuestro firme destino.

En los venerables cronicones mayas, en los anales del Viejo Imperio, vaga el perfume de las peregrinaciones fraternas que venían de Costa Rica al Mayab. La epopeya de la España conquistadora creó y consolidó la trayectoria universal de nuestros al amparo de la divisa sibilina, alienta juventud costarriqueña.

Bien haya el Capítulo Mexicano del Colegio Internacional de Cirujanos, que nos congrega para honrar a Usted. Bienvenido sea el colega ilustre, cuya presencia es alteza de miras y elevación de sentimientos.

A continuación, el Señor Doctor Don Gonzalo Casteñeda, Presidente del Capítulo Mexicano, pronunció el siguiente discurso oficial:

Señor Presidente y distinguido colega:

Vuestra ilustre persona por su austero continente nos es atractiva y simpática, vuestra Excelencia sin ostentación ni hacer gala de grandeza impone, domina; miro su destacada presencia trifásica: como Jefe de Estado que representa una nación, como hombre que trae el espíritu de un pueblo y como representativo de una cultura, hermosa misión. El Gobierno de la República le ha rendido ya honores como Presidente de un supremo poder ejecutivo, las gentes lo aplaudieron ya como gran costarricense, el Capítulo Mexicano del Colegio Internacional de Cirujanos en esta ceremonia recibe, vé al hombre, al Fellow, al médico eminente.

Yo quisiera, Señor, haber conocido las ciudades de San José y Cartago, de Heredia y Alajuela, cruzado los bosques de Talamanca, visto los volcanes, los golfos y bahías de esa tierra feraz que pisó Colón, todo para pintar el panorama de su patria y hacerlo sonreir, querría que luciera aquí el escudo y flotara la bandera de Costa Rica para hacerlo vibrar con las emociones de la ausencia, pero ya que no me es dable imaginar con la fantasía y tocar su corazón, llamaré a su pensamiento.

Costa Rica como país autónomo tiene un siglo, su vida como provincia del antiguo reino de Guatemala y como entidad, después, de la República Federal de Morazán está en la historia de Centro América, esta región ístmica contiene episodios de la vida mexicana. En su conquista estuvieron Pedro de Alvarado y Cristóbal de Olid férreos capitanes del conquistador de Anáhuac, por las Hibueras batalló Hernán Cortés y en los primeros años de la Independencia de México aquellas tierras fueron dominios del efímero Imperio de Iturbide, Agustín Primero.

El territorio costarricense quedó en el Septentrión pero apartado de México, a la nación nos unía la historia colonial y la afinidad étnica pero el barco de vapor no acercó la lejanía de Puerto Limón y Punta Arenas, la confraternidad era oficial, hoy es diferente; nos va a eslabonar la carretera panamericana, el vuelo del aeroplano nos aproxima, la onda de la radio nos funde, llegó un embajador, otro es el porvenir

La misión de un gobernante no es sólo administrar, es la de estadista que busca además lo intangible e inmaterial de la vida, que pugna porque su país a un brazo fuerte lo anime un espíritu fuerte; la tarea internacional de un Jefe de Estado no es sólo diplomática sino creadora de civismo y solidaridad para que los hombres cumplan y sientan la humanidad. Su viaje Señor Doctor y Presidente trae ese pensamiento, formarle, mostrarle al pueblo de Costa Rica un horizonte terreno y moral más amplio para engrandecerse y volar; su viaje no es de recreo, es el de un patriota que trae nobles y elevados propósitos. Se interrumpe la clínica, descansa el bisturí, otras actividades bullen, otra es ahora la preocupación; que la Suprema Inteligencia lo inspire, que sus virtudes lo alumbren. Todo vibra en torno del éxito, el ánima de los médicos mexicanos más fuertemente.

La nueva liga que se asoma, más apretada y cordial, será económica, más íntima en el ideal democrático, ello es trascendente pero no substancial porque lo que en verdad unifica a las naciones no sólo es la política y la comunidad de intereses, sino la hermandad de los pueblos, la fusión de sus aspiraciones y propósitos; la civilización no radica únicamente en la riqueza mundana o en el progreso de lo material de la vida sino también en la concordia de los sentimientos; para que una obra sea fructífera debe animarla el espíritu, y el espíritu está en hombre. La visita de Usted, Señor Doctor y Presidente, trae saludos, también el alma de su pueblo, aquí lo recibe no sólo el protocolo, por igual el alma del pueblo mexicano.

Ciertamente, el viaje a esta Metrópoli de su Excelencia, Señor Doctor Calderón Guardia, como Jefe de Estado, sea como visita oficial de Gobierno a Gobierno a como personal de Presidente a Presidente es cosa magnífica, porque el abrazo de dos representativos es símbolo, es vínculo; su descenso apoteósico en Balbuena rodeado de su comitiva fué hermosa página de Historia; pero yo contempló también y mejor ese suceso como una embajada que nos traía la paz, la amistad y simpatía de un pueblo.

Para los médicos de aquí estos días nos han dicho algo más, con orgullo y emoción hemos visto Presidente a un compañero, hemos mirado como la Presidencia de una República cabe en la Medicina, como esta ciencia del bien es capaz de mandar, y como una cultura universitaria puede involucrar la popularidad que encumbra. El médico está preparado para gobernar porque está educado en la investigación de las causas, la sociología es biología; está Usted en su puesto Señor Doctor Calderón Guardia, la ciencia honra a los Gobiernos.

Otra coincidencia fausta, el Capítulo Mexicano del Colegio Internacional de Cirujanos ha tenido la fortuna de que el ilustre huésped de México, a un elevado cargo oficial acople el título de Fellow Honorario y Regente de ese Colegio, y de que un prócer sea miembro conspícuo de ese Instituto; ya aquí nuestro Supremo Mandatario y el Jefe del Departamento de Salubridad Pública son también Fellows Honoris Causa, galardón como insignes protectores; el nombre y prestigio de Usted Señor Doctor, son una presea de la intelectualidad costarricense.

Como homenaje al Fellow quisimos robarle unas horas para tenerlo aquí fuera de la Cancillería y hablarle con sencillez, para ofrendarle el pan y la sal de la hermandad, porque natural es que se estrechen quienes unidos luchan en la dura brega de una conquista, queremos que esto acto exento de ceremonial no lo ofusquen otros esplendores y que se grabe imborrable en su recuerdo.

Este recinto Señor Doctor, está en la casa colonial que fué prisión del egregio cura Don José María Morelos y Pavón, integérrimo defensor de nuestra Independencia, héroe de la talla de Bo[illegible]var, Sucre [illegible] San Martín, libertadores [illegible]rica; [illegible]s

Extraordinary Session of the Mexican Chapter in honor of the President of Costa Rica. Standing from left *right: Doctor Don Francisco Fonseca García, Secretary of the Mexican Chapter; Doctor Don Gonzalo* ñeda, President of the Mexican Chapter; Doctor Don Marion Quiñones H., representing Doctor Don Victor dez Manero, Chief of the Department of Public Health; Doctor Don Rafael Angel Calderón Guardia, nt of the Republic of Costa Rica, National Regent and Honorary President of the Costa Rican Chapter College; Doctor Don Gustavo Argil, Director of the Faculty of Medicine of the National University of icine; Lic. Don Alberto Echandi Montero, Secretary of Foreign Relations of the Republic of Costa Rica; octor Don Manuel A. Manzanilla, International Vicepresident of the International College of Surgeons; Don Carlos Jinesta Muñoz, Minister of Costa Rica in Mexico. At the right in the first row: Doctor Don Manuel Márquez Rodríguez, Dean of the Faculty of Medicine of the University of Madrid, and next to him partly hidden by Dr. Rodríguez, Doctor Don Darío Fernández Fierro, Vicepresident of the Mexican Chapter.

en la Facultad de Medicina alma mater de las generaciones médicas, manantial de saber donde también abrevan jóvenes compatriotas de Usted, de aquí llevarán bálsamo para curar dolores de allá, su Excelencia entró hoy al templo donde está su religión.

Señor Doctor Rafael Angel Calderón Guardia, yo por gracia y favor soy Fellow Honorario como Usted, Regente de un Capítulo como Usted, ya que la casualidad me ha subido a la altura de su persona, con ese derecho y autoridad del Colegio y traduciendo el vocablo inglés, quiero en estos momentos llamarlo, mi compañero en la obra, mi amigo en la vida, mi hermano en el saber; me considero afortunado de haberlo conocido, lo saludo y le pido que se lleve mi nombre; lo felicito por haber venido, lo felicito porque volverá a su país, victorioso, sí, como triunfador, porque se lleva el corazón de México.

Cerró la sesión el Señor Doctor Don Rafael Angel Calderón Guardia, dando lectura al discurso siguiente:

Señores
Director de la Facultad de Medicina,
Presidente del Capítulo Mexicano del Colegio Internacional de Cirujanos,
Distinguidos Colegas:

Vuestra hidalguía, que es blasón precioso en el escudo de vuestras tradiciones inmortales, me abre las puertas de vuestra Facultad de Medicina, me colma de elogios que sobrexceden mis modestos merecimientos y me ofrece esta ilustre Casa como mi propia escuela.

Con justeza y exactitud de concepto afirmáis que "a vuestra Escuela de Medicina le fué legado el timbre de primate ilustre y que aquí palpita la tradición universitaria más antigua del Continente"; y es que no en vano sois los depositarios de un maravilloso legado histórico, que amasaron con brazo robusto y espíritu vidente los aborígenes cultos y heroicos y los conquistadores pujantes y civilizadores—unos y otros de talla gigantesca—y sobre el cual, como sobre pétreos cimientos, habéis edificado, en una epopeya que ha demostrado vuestro indómito coraje, este gran Pueblo que ha llegado a conquistar el cariño y la admiración del Continente.

Nosotros los costarricenses no podemos ufanarnos de una tan brillante historia universitaria. Clausurada, por motivos que no hace el caso analizar ahora, a fines del siglo pasado nuestra Universidad de Santo Tomás, sus puertas permanecieron cerradas y sordas al reclamo de una juventud sedienta de cultura, hasta que bajo mi administración volvieron a cobrar vida sus claustros y a poblarse de un batallón de estudiantes, que van allí a abrir los horizontes de su mentalidad y a prepararse para las rudas batallas de la existencia.

El señor Presidente del Capítulo Mexicano del Colegio Internacional de Cirujanos—Capítulo ya incorporado a su Alma Mater, vuestra Escuela de Medicina, habiéndose realizado con ello un verdadero acierto—se refiere amablemente a mi condición de Fellow Honorario y Regente de ese Colegio en Costa Rica. Esta distinción que tanto me honra y que constituye un noble estímulo en los empeños de mi profesión, es una nueva evidencia de que los médicos nos debemos, por sobre los rumbos de cualesquiera otras incitaciones o tendencias, al impulso indeclinable de nuestra vocación.

La creación del Colegio Internacional a que vengo refiriéndome es la centralización del concepto del cosmopolitismo o universalidad de nuestra ciencia, que se propone el remedio o el alivio de la enfermedad y del dolor, flagelos que castigan a la humanidad en todas las latitudes del planeta y que vienen persiguiéndola desde los más oscuros y lejanos días de la prehistoria. Realiza, asimismo, tal Colegio, el sabio aforismo de que la ciencia—y podemos afirmar que especialmente la medicina—no tiene Patria, por donde quienes a tal disciplina hemos dedicado los mejores afanes de nuestra vida tenemos que sentirnos, más que colegas, hermanos, en la alta y superior fraternidad que busca la salud y la alegría del género humano.

Creo que ha de ser en días como los presentes—pletóricos de lucha y dolor tras la libertad del mundo—cuando como colegiados e individualmente podemos los médicos enaltecer y engrandecer, santificándola, nuestra profesión. Y ello ha de facilitarse, pienso yo, por medio de la unidad, unidad que en el México de hoy tiene un ejemplo relevante, pues es imposible desconocer que por encima de todas las tendencias, de todos los criterios y de todas las exaltaciones ocasionales, vívense aquí supremas ansias de superación espiritual y material, pero encauzadas unánimemente al engrandecimiento y gloria de México. Y esa es la unidad de que os hablaba.

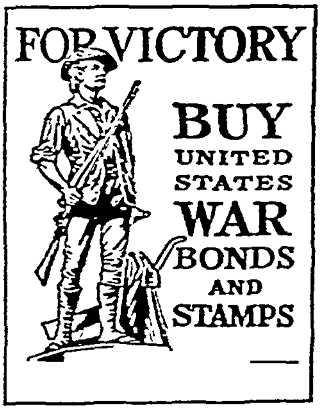
Los hijos de nuestra América—herederos todos por igual de los insignes atributos de la raza ciclópea que pobló este Continente—abocados al conflicto que conmueve al mundo en cumplimiento de un imperativo de su destino indeclinable, deben fundirse en un apretado haz de corazones y de espíritus; pero como no pueda amarse lo que no se conoce, las patrias americanas deben acercarse; sumar sus inquietudes y sus aspiraciones optimistas; en grandiosa anfictionía como la que soñó el padre Bolívar discutir sus problemas comunes; apagar recelos y malos entendimientos; alzar el estandarte de América toda como la sagrada divisa del porvenir, y declarar suicida y atentatorio contra los intereses permanentes de América, todo intento de discordia o siquiera de alejamiento entre los pueblos que en ella se albergan.

Contribuyen por modo decisivo al fortalecimiento de ese ideal las visitas de los Jefes de Estado a los países hermanos, porque sus conglomerados sociales se ven acercados y unidos en las personas de sus mandatarios. Son estas oportunidades preciosas para estudiar y analizar de cerca multitud de aspectos más o menos ignorados, que interesa conocer a conciencia para el mejor éxito de las tareas de Gobierno; y en ese anhelo de fraternización efectiva de América, el Colegio Internacional de Cirujanos puede colaborar excelentemente por medio de las distinguidas representaciones con que cuenta en todos los países.

Yo me he referido en varias ocasiones al hecho elocuente de que más de dos centenares y medio de estudiantes costarricenses estudian en los centros docentes de México, especialmente en esta universidad. Pues bien, cuando estos jóvenes, coronadas sus aspiraciones, retornen a la Patria, realizarán el bello emblema de vuestro escudo pues por vuestra raza—la raza americana—hablará y actuará su espíritu, el que forjásteis para ellos, con vuestras sabias enseñanzas, como coraza en la arremetida y como ala en el vuelo.

Al saludaros, con mi más efusiva cordialidad en mis últimas palabras, quiero significaros mi más profundo reconocimiento por los conceptos elogiosos para mi Patria y para este colega que habrá de recordaros siempre.

Terminada la sesión, se hizo un breve recorrido de la Facultad, cuya descollante arquitectura barroca berniniana enmarcaba dignamente la presencia del distinguido visitante costarricense; se hizo una pausa íntima en la Dirección, admirándose algunas de las valiosas pinturas que posee la Facultad, en particular la gran composición hagiológica de Cabrera que majestuosamente se destaca en lugar de honor; y entre las exclamaciones afectuosas de los estudiantes se retiró el Señor Doctor Don Rafael Angel Calderón Guardia, F.I.C.S. (Hon.) Presidente de la República de Costa Rica, Regente Nacional y Presidente Honorario del Capítulo Costarricense del Colegio Internacional de Cirujanos.



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President U. S. Chapter

TO THE MEMBERS OF THE MEDICAL PROFESSION OF THE UNITED STATES OF AMERICA

The officers of the International College of Surgeons and its United States Chapter extend a cordial invitation to you and to all members of the profession in good standing in their State Medical Societies and their guests to attend the Fourth International Assembly of the International College of Surgeons and the Eighth National Assembly of the United States Chapter

The Assembly will be held from June 14 to 16, inclusive, at the Waldorf-Astoria Hotel New York City. A comprehensive program of the highest scientific interest, with panel discussions and demonstrations of important problems, as related to WAR SURGERY AND REHABILITATION will be presented by outstanding members of the profession in the United States and by foreign delegations.

The Arrangements Committee of the City of New York is doing its utmost to make this Assembly an outstanding one in the dissemination of knowledge developed during the war. We express our appreciation herewith to all who aided us in the culmination of an instructive and successful Assembly.

FRED H. ALBEE, M.D., Sc.D., LL.D., F.A.C.S., F.I.C.S.
President, International College of Surgeons

THOMAS A. SHALLOW, M.D., F.A.C.S., F.I
President, United States Chapt
International College of

PROGRAM

FOURTH INTERNATIONAL ASSEMBLY

In Conjunction with Eighth National Assembly
of the

INTERNATIONAL COLLEGE OF SURGEONS

New York, N.Y. June 14, 15, 16, 1943

Convention Headquarters . . . Waldorf-Astoria Hotel

As part of our National War Effort, this meeting has been opened to all physicians in good standing in their State Medical Societies.

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Dr. Herman de Las Casas
Europe:
Dr. Rudolph Nissen

PROGRAM

MONDAY, JUNE 14, 1943

REGISTRATION—8:00 A.M.

9:00 A.M.—12:00 Noon

INVOCATION

ADDRESS OF WELCOME

His Honor, Mayor Fiorello La Guardia, Esq.
Mayor of City of New York

1. Capt. Reynolds Hayden, M.C., U.S.N., District Medical Officer Third Naval District.
   Experiences at the Naval Hospital at Pearl Harbor During and After the Japanese Raid.
2. Col. R. W. Bliss, M.C., U.S.A., Surgeon, Eastern Defense Command and First Army.
   The Transportation and Care of the Sick and Wounded from the War Zones.
3. Capt. W. M. Craig, M.C., U.S.N.R., U.S. Naval Hospital, National Naval Medical Center, Bethseda, Md.
   Shock.
4. Commander B. W. Hogan, M.C., U.S.N., Bureau of Medicine and Surgery, Navy Department, Washington, D. C.
   Blast Injuries.
5. Lt. Col. D. B. Kendrick, M.C., U.S.A., Army Medical School, Army Medical Center, Washington, D. C.
   Use of Blood Plasma.

LUNCHEON—VISITING EXHIBITS

2:00 P.M.—5:00 P.M.

1. Dr. E. A. Rovenstein, Bellevue Hospital, New York City.
   Report on Anaesthesia Practices in the Present War.
2. Brig. Gen. A. H. Waitt, Washington, D. C.

War Casualties Due to Gas.

Capt. C. M. Shaar, M.C., U.S.N., U.S. Naval Hospital, Philadelphia, Pa.
Thoracic Injuries.

Papers from Great Britain by title.
Mr. Rodney Maingot.
Management of Wounds of the Abdomen.
Mr. Hamilton Bailey.
Mr. Basil Hughes Blast.
Classification of Wounds.
Mr. Hamilton Bailey.
Crush Syndrome.
Mr. James Brailsford.
Localization of Foreign Bodies by X-rays.
Mr. Robert McNeill Love.
Gas Gangrene.
Mr. Ernest Finch.
An Historical Survey of the Treatment of War Wounds.

5. Delegation from Peru.
Dr. Fortunato Quesada.
A New Procedure for Treatment of War Fractures.
Dr. Belisario Sanchez.
Treatment of Compound Fractures.
Dr. Julio Faldini.
Reconstruction of the Hip.
Dr. Ezequiel Martinez.
Some Considerations about Treatment of Fractures.
Dr. Enrique Camprubi.
Four Cases of Rehabilitation Surgery.
Dr. Francisco Graña.
Anesthesia in War Surgery.

8:30 P.M.—11:00 P.M.

1. Capt. W. L. Mann, M.C., U.S.N., Naval Medical Research Institute, National Naval Medical Center, Bethseda, Md. President of the Association of Military Surgeons of the United States.
Research in Naval Medicine.

2. Col. R. H. Kennedy, M.C., U.S.A., Percy Jones Medical Hospital, Battle Creek, Michigan.
The Type of War Casualties Returning to a General Hospital in This Country.

3. Dr. V. V. Lebedenko, Representative of the Red Cross and Crescent Society of the U.S.R.R.
The Organization of Surgical Aid in the Soviet Army.

4. Lieut. Jose Londres, Brazilian Navy.
War Surgery in the Brazilian Navy.

TUESDAY, JUNE 15, 1943
REGISTRATION—8:00 A.M.
9:00 A.M.—12.00 NOON

1. Dr. Rudolph Nissen, New York City.
Dr. Ernest W. Bergmann, New York City.
Cineplastic Procedures.

2. Dr. Roger Anderson, Seattle, Washington.
Self-Aligning Method of Treating Fractures of the Shaft.
Kodachrome Slides (Also Motion Pictures).

3. Delegation from Mexico. Medical Problems of the War.
Dr Victor Fernandez Manero, Chief of the Public Health Department of the Mexican Government.
Emergency Sanitary Services in Tropical War Zones.
Dr. Gustavo Argil, Director of the Faculty of Medicine, National University of Mexico.
Shock.
Dr. Dario Fernandez, National Vice-president of Mexican Chapter, International College of Surgeons.
Dr. Rudolfo Ayala Gonzales.
Hemorrhage.
Dr. Miguel Lopez Esnaurrízar.
Dr. Estaban Paulin.
Infection.
Dr. Manuel A. Manzanilla, International Vice-president International College of Surgeons.
Burns.
Major Manuel Sanchez Garibay, M.C., Delegate of Department of Military Medicine of War Department, Mexico.
Head Injuries.

LUNCHEON—VISITING EXHIBITS
2:00 P.M.—5:00 P.M.

1. Lt. Col. R. G. Spurling, M.C., U.S.A. Walter Reed General Hospital, Chief of Neurosurgical Section, Washington, D. C.
(a) Herniation of the Nucleus Pulposus of the Lower Lumbar Region.
(b) Injuries of the Spinal Cord and Peripheral Nerves.
(T [illegible] Sli[illegible]

2. Dr. J. Rudolph Jaeger, Clinical Professor of Neurological Surgery, Jefferson Medical College, Philadelphia, Pa.
   Cranio-cerebral Injuries.
   (Motion Pictures).
3. Capt. Reynolds Hayden, M.C., U.S.N., District Medical Officer, Third Naval District.
   The Present Treatment of Wounds and Burns.
4. Capt. H. I. D. Kirkham, M.C., U.S.N.R., U. S. Naval Hosp., San Diego, California.
   Plastic Surgery Applied to War Injuries.
5. Dr. Jerome P. Webster, New York City.
   The Training of Army Surgeons in Plastic Surgery.
6. Dr. Vilray P. Blair, St. Louis, Missouri.
   The Relation of the Early Care and the Final Outcome of Major Face Wounds in War Surgery.
7. Dr. Enrique St. Loup B., Bolivia.
   Some Uses and Disadvantages of Tubed Pedicle Flaps.
   (By title)

WEDNESDAY, JUNE 16

REGISTRATION

9:00 A.M.—12:00 A.M.

1. Dr. Philip Wilson, New York City, Founder and Medical Director of American Hospital in Britain, 1940-42; Surgeon-in-Chief, Hospital for Special Surgery, New York City. 90 minutes.
   Treatment of Compound Fractures.
2. Dr. Fred H. Albee, New York City, President, International College of Surgeons.
   Reconstruction of Bones and Joints.
3. Dr. Wm. D. McFee, Boston, Mass., Consultant in Physiotherapy, U. S. Veterans Administration.
   Physical Medicine and the Rehabilitation Problem.
4. Dr. Felix Mandl, Palestine.
   Dr. Leonard Doljanski.
   (a) Cell Growth Promoted by Animal Tissue Extract.
   (b) Operative Nearthrosis in Cases of Comminuted Fractures of the Elbow.
   (By title)
5. Dr. Emin Erkul, Istanbul, Turkey.
   Wounds of the Mediastinum.
   (By title)

LUNCHEON—VISITING EXHIBITS

2:00 P.M.—5:00 P.M.

1. Dr. Robert T. Merrill, Commander-in-Chief, Veterans of Foreign Wars.
   A Layman's View of Rehabilitation.
2. Lt. Col. C. E. Gorman, M.C., U.S.A., War Department, Office of the Surgeon General, Washington, D C. 30 minutes.
   Rehabilitation.
   Discussion by Psychologist.
3. Dr. Chas. M. Griffith, Medical Director, Veterans Administration, Washington, D.C. 20 minutes.
   Surgical Treatment of Tuberculous and Malignant Disease of the Respiratory Tract.
4. Col. H. D. Corbusier, Medical Reserve, Inactive, U. S. A.
   The Conservation of Man Power for War.
5. Dr. J. Heng Liu of China.
   Difficulties of a Chinese Army Surgeon.

8:30 P.M.—11:00 P.M.

1. Col. L. Sanders, M.C., Field Artillery, Chief Re-employment Division, Selective Service System, Washington, D. C.
   The Administrative Procedures in Reintegrating the Armed Forces into Civilian Life.
2. Prof. Herman de las Casas, Dean of the Faculty of Medicine, University of Caracas, Venezuela.
   Manuel Corachan Memorial Oration in Surgery.
3. Dr. William Bates, Philadelphia, Pa., Professor of Surgery, Graduate School of the University of Pennsylvania, Vice-president, American Chapter, International College of Surgeons.
   Address.

ROUND TABLE DISCUSSIONS

(Rooms announced on bulletin boards)

MONDAY, JUNE 14

10:30 A.M.—12:00 A.M.

1. *Treatment of Fractures by Stader Fixation Splint.*
   Capt. C. M. Shaar, M.C., U.S.N., from the Philadelpha Naval Hospital, presiding.
2. *The Prevention and Treatment of Shock in the Wounded.*
   Dr. E. J. McCormick, Toledo, Ohio, presiding.
   Studies on Circulation Time in Shock.
   Dr. Jablons, New York, presiding.

3:30 P.M.—5:00 P.M.

1. *Treatment of Burns. The Prevention of Contractures by Early Motion and the Open Air Paraffin Wax Treatment of Burns.*
   Lt. Commander Ralph C. Pendleton, M.C., U.S.N.R.
   Discussion.
   Lt. Col. Manuel Robion, Surgical Director of the National Army, Dominican Republic.

TUESDAY, JUNE 15
10:30 A.M.—12:00 A.M.

1. *Injuries of the Neck.*
   Dr. André Crotti, Columbus, Ohio, Surgeon, Grant, St. Francis and Mt. Carmel Hospitals; Past President, International College of Surgeons, presiding.
2. *Effects of Traumatism on Abdominal Viscera.*
   Dr. Wm. Seaman Bainbridge, New York City, Surgical Director, Manhattan State Hospital; Cons. Surgeon many metropolitan hospitals, U. S. Public Health Service, N. Y. District; U. S. Navy, Third Naval District, presiding.

3:30 P.M.—5:00 P.M.

1. *Abdominal Visceral Injuries and Management of Peritonitis.*
   Dr. Fred Douglass, Toledo, Ohio, Director of Surgery, St. Vincent's Hospital; Past president, International College of Surgeons, presiding.

WEDNESDAY, JUNE 16
10:30 A.M.—12:00 A.M.

1. *Penetrating Wounds, Foreign Bodies and Sympathetic Ophthalmia of the Eye.*
   Dr. E. B. Burchell, New York City, Curator, New York Eye and Ear Infirmary.
   Dr. B. Samuels, New York City, Ophthalmic Surgeon and Pathologist, New York Eye and Ear Infirmary, presiding.
2. *Autopyotherapy in General and War Surgery.*
   Dr. Martin Bourand, Port-au-Prince, Haiti, Professor of Surgery of the Faculty of Medicine, Port-au-Prince.

3:30 P.M.—5:00 P.M.

1. *Aviation in Relation to the Ear.*
   Dr. J. O. MacDonald, New York City, Associate Clinical Professor in Otolaryngology, Post Graduate Medical School, Columbia University, presiding.
2. *First Aid Treatment and After Care of Large Surface Wounds.*
   Col. J. L. Gallagher, M.C., U.S.A.

DELEGATES FROM THE FOLLOWING COUNTRIES WILL REPRESENT THEIR RESPECTIVE NATIONS

Argentina
Dr. Alejandro Ceballos
Dr. Oscar Gomez
Dr. Alberto Gutierrez
Dr. Alejandro Pawlowsky
Dr. José Valls
Dr. Ricardo De Tchessary

Bolivia
Dr. Enrique St. Loup B. Paper by title

Brazil
Dr. Oswaldo P. Campos Paper
Dr. Estellita Lins
Dr. Dagmar Chaves
Dr. Domingo da Costa
Dr. J. C. Monteiro

Canada
Dr. Otto DeMuth

Colombia
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Dr. Jose M. Ortiz

Cuba
Col. Juan M. Leal
Lt. Col. Eduardo Garcia Porras-Pita

Dominican Republic
Dr. Rafael A. Battle
Lt. Col. Manuel Robion Discussion

Great Britain
Mr. Rodney Maingot
Mr. Hamilton Bailey

Haiti

Dr. Martial Bourand	Paper
Dr. E. S. Villard	
Dr. Louis Maxmilien	
Major R. B. Laroche	

Honduras

Dr. Salvador Paredes	Paper
Dr. H. D. Guilbert	Paper
Dr. Gomez-Marquez	Paper

India

Lt. Col. M. M. Cruikshank
Dr. D. S. Puttanna
Dr. T. Seschachalen
Dr. A. M. Ponnanbalen
Dr. B. N. Balakrishma Rao

Mexico

Dr. V. F. Manero	Paper
Dr. M. A. Manzanilla	Paper
Dr. M. L. Esnaurrízar	Paper
Dr. D. F. Fierro	Paper
Dr. F. F. Garcia	Paper
Dr. E. P. Gonzales	Paper
Dr. G. Argil	Paper
Dr. L. de la Rosa	Paper
Dr. Hector Manjarrez Gomez de la Torre (Representing General Francisco Castillo Najera)	Paper

rocco

Dr. Pérard
Dr. Dubois Roquebert
Dr. Martin
Dr. Comte
Lt. Col. Ribolet

Nicaragua

Dr. Desiderio Roman

Palestine

Dr. Felix Mandl	Paper by title
Dr. L. Dolinski	Paper by title

Panama

Hon. A. S. Boyd	Paper
Dr. L. S. Alfaro	Paper
Dr. Jaime de la Guardia	Paper

Paraguay

Dr. Manuel Giagni	Paper
Col. Luis Santiviago	Paper

Peru

Dr. Francisco Graña	Paper
Dr. Fortunato Quesada	*Paper*
Dr. O. G. del Villar	Paper
Dr. Belisario Sanchez	Paper
Dr. Julio Faldini	Paper
Dr. Ezequiel Martinez	Paper
Dr. Enrique Camprubi	Paper

Russia

Dr. V. V. Lebedenko	Paper

Turkey

Dr. Mehmet Emin Erkul	Paper by title
Dr. Fahri Arel	
Dr. Hazim Bumin	

Uruguay

Dr. E. B. Acevedo
Dr. Domingo Prat
Dr. Armando M. Loubevac

Venezuela

Dr. Herman De Las Casas	Oration in Surgery

Scientific, Military and Rehabilitation Exhibits

The State of New Jersey, Rehabilitation Commission, John H. Toohey, Jr., Director, Newark, New Jersey.

A Visual Demonstration of the Work of Rehabilitation in its Curative Workshop. J. C. Kupper in charge. Dr. F. G. Dilger and nurse in attendance.

Regimental Aid Station, set up by the Medical Detachment of the 17th Regiment Armory, under the direction of Major R. Donald Beck, Regimental Surgeon. The exhibit will be manned by members of the New York State Guard of the 17th Regiment, medical detachment, in daily attendance.

American Red Cross. An exhibit showing a lighted diorama on a blood plasma transfusion. Panels with photographic montages on the Red Cross various services.

Prevention of Blindness Service of the New York State Commission for the Blind, presenting an exhibit pointing out through a series of posters the relationship between vision conservation program and the National Defense.

The Veterans Administration of Washington, D. C., Dr. Charles M. Griffith will exhibit charts of the routine and special measures used in Bibliotherapy, Occupational Therapy and Physical Therapy used to aid in the treatment of patients in the Veterans Administration Hospitals.

The Universal School of Handicrafts, chartered by the Board of Regents of the State of New York, and now engaged in a study of creative activities for rehabilitation, will present material and findings in this particular field, under the personal direction of Edward T. Hall, Director.

Dr. Alfred Angrist, Pathologist, Queens General Hospital, Jamaica, L. I.

Demonstration of Brain Injuries by Color Transparency.

Capt. Wm. Seaman Bainbridge, M.C., U.S.N.R., President American Academy of Physical Medicine, New York City.

Physical Medicine in the United States Navy.

Dr. Chas. W. Bethune, Buffalo, N. Y.

Models: an exhibit in cooperation with the Sisters Hospital of Buffalo, N. Y. and the Department of Health under the direction of Dr. F. E. Fronczak, Buffalo, N. Y.

Dr. H. I. Biegelcisen, Stuyvesant Polyclinic, New York City

Sclerotherapy for Rehabilitation.

Dr. Benjamin Jablons, New York City.

Photoelectric Determination of Circulation Time.

Dr. Kenneth A. Koerber, Medical Director of Cramp Shipbuilding Co., Philadelphia, Pa

Rapid Rehabilitation in Shipyard Injuries

Dr. Maxwell Maltz, West Side Hospital and Dispensary, New York City.

New Plastic Procedures.

Major Murray Sanders, Medical Corps, U.S.A. and R. C. Alexander, M.S., New York City.

Epidemic Keratoconjunctivitis.

State of New York, Department of Public Health, Albany, N. Y.

Newer Concepts of the Shock Syndrome

Dr. Henry K. Taylor, Goldwater Memorial Hospital, New York City.

Bone Infarcts and Aseptic Necrosis

Dr. J. Eastman Sheehan, New York Polyclinic Medical School and Hospital, New York City.

Plastic Reparative Surgery.

Dr. Jacques Maliniac, New York City.

Plastic Surgery—Skin Grafts versus Flaps.

Dr. Charles Gilfillan, Hollywood, California.

Internal Fixation of Fractures—Recent Advances.

Dr. Lyman Weeks Crossman and *Dr. Frederick M. Allan*.

Refrigeration Anaesthesia.

A. A. Goldberg, M.D., Chicago, Ill.
S. N. Blackberg, M.D., Chicago, Ill.
P. Stanley, Newark, N. J.

The Pathology of Arthritis.

C. Mosser Taylor, M. D.
Charles Gilfillan, M.D.
Alfred Gallant, M.D.
Capt. Kenneth Townsend, M.C., U.S.A.
Comdr. Rudolph Joldersma, M.C., U.S.A.
Maj. Alonzo Neufeld, M.C., U.S.A.

From the Department of Orthopedic Surgery, College of Medical Evangelists, Los Angeles General Hospital, and United States Naval Hospital, San Diego.

Recent Advances in Internal Fixation of Fractures.

National Rehabilitation Association, Inc., Roanoke, Virginia. The Association is dedicated to the welfare of the physically handicapped persons of all types. It is largely concerned with the promotion of legislation in favor of the physically handicapped.

Space will be taken up with publications and displays from various states in the nation.

Army Medical Museum of the Office of the Surgeon General.

The exhibit will include clinical photographs prepared by the Museum and Medical Arts Service, Army Medical Museum.

A series of paintings and drawings for teaching first aid to combat troops, presenting through the Surgeon-General's office and the Army Medical Museum, an entirely new and practical approach based upon conditions under which a wounded soldier may find himself.

MOULAGE EXHIBIT

Composed of moulages depicting typical wounds experienced in World War II.

TRANSPARENCIES

Photomicrographs illustrating renal lesions of the crush syndrome and other clinical conditions.

MOTION PICTURES

1. *Capt. Reynolds Hayden*
    (a) Medical Care of Amphibious Forces
    (b) Personal Damage Control
2. *Dr. J. Rudolph Jaeger*
    Craniocerebral Injuries
3. *Dr. J. W. Maliniac*
    Plastic Surgery—Skin Grafts versus Flaps in the repair of Skin Defects of the Face and Neck
4. *Dr. Fred Albee*
    a. Reconstruction Operation for Ruptured Crucial Ligament
    b. H-Graft for Fracture of the Patella
    c. Arthrodesis of the Knee with Bone-Graft Peg
    d. Arthroplasty of the Knee
    e. Bone Peg of the Hip, with End Results
    f. Arthroplasty of the Elbow
5. *Dr. Roger Anderson*
    Application of Treatment of Fractures. A 10 minute movie.
6. *Capt. C. M. Shaar, M.C., U.S.N.*
    Sound Film. Treatment of Fractures by the Stader Fixation Splint
7. *Dr. J. Eastman Sheehan*
    Surgical Operations depicting the Modern Treatment of War Wounds and War Burns as practiced in English Hospitals
8. *Dr. Maxwell Maltz*
    Repair of Recent Facial Wounds
9. *Dr. Moses Behrend*
    a. Inguinal, Femoral, Incisional and Diaphragmatic Hernia Repair with Living Fascia (Kodachrome)—15 minutes)
    b. Extrapleural Graded Thorocoplasty (Kodachrome—15 minutes)
10. *Dr. G. G. Burniston,* Squadron Leader, Royal Australian Air Force
    Rehabilitation in the R.A.F.
11. *Association of Limb Manufacturers of America, Inc.*
    Amputation below the Knee
12. *Dr. Rudolph Nissen*
    Dr. Ernest W. Bergman
    Cineplastic Procedures
13. *Mr. Hamilton Bailey,* London, Eng., and others.

TECHNICAL EXHIBITS

(Booths 1 to 21 in Jade Room; Booths 22 to 42 in Astor Gallery)

Booth No.

1. Journal of the International College of Surgeons.
2. International College of Surgeons.
3. Austenal Laboratories, Inc., New York City.
4. American Hospital Supply Corporation, Chicago, Ill.
5. The Berlitz Schools of Languages, New York City.
6. J. E. Hanger, Inc., New York City.
7. American Sterilizer Company, Erie, Pa.
8. Cameron Heartometer Company, Chicago, Ill., New York, N. Y.
9. Phillip Morris & Co., Ltd., Inc., New York City.
10. American Safety Razor Corporation, Brooklyn, N. Y.
11. Novocol Chemical Manufacturing Co., Brooklyn, N. Y.
12. Pioneer Rubber Company, Willard, Ohio.
13. Clay-Adams Company, Inc., New York City.
14. Clay-Adams Company, Inc., New York City.
15. Ciba Pharmaceutical Products, Inc., New York City.
16. Singer Sewing Machine Company, New York City.
17. Singer Sewing Machine Company, New York City.
18. Singer Sewing Machine Company, New York City.
19. Singer Sewing Machine Company, New York City.
20. Medical Film Guild, New York City.
21. Johnson & Johnson, New Brunswick, N. J.
22. The Tower Company, Inc., Seattle, Wash.
23. The Doho Chemical Corporation, New York City.
24. J. R. Siebrandt Manufacturing Co., Kansas City, Mo.
25. Camel Cigarettes — Medical Relations Div., New York City.
26. Camel Cigarettes — Medical Relations Div., New York City.
27. Wallace & Tiernan, Inc., Belleville, N. J.
28. The Alkalol Company, Taunton, Mass.
29. Wisconsin Alumni Research Foundation, Madison, Wis.

30. Bard-Parker Company, Inc., Danbury, Conn.
31. Schering Corporation, Bloomfield, N. J.
32. Contact Lens Service, New York, N. Y.
33. Carbisulphoil Company, Dallas, Tex.
34. Davis & Geck, Inc., Brooklyn, N. Y.
35. J. H. Emerson Co., Cambridge, Mass.
36. Cameron Surgical Specialty Co., Chicago, Ill., New York, N. Y.
37. The Denver Chemical Mfg. Co., New York City.
38. Canadian Radium and Uranium Corporation, New York City.
39. T. H. McKenna, Inc., New York City.
40. White Laboratories, Inc., Newark, N. J.
41. Obrig Laboratories, Inc., New York City.
42. The Gilliland Laboratories, Inc., Marietta, Pa.

THE ALKOLOL COMPANY

Taunton, Mass.
Booth 28

Showing Alkalol, claimed by the manufacturers to be a carefully balanced alkaline saline solution It is aqueous, contain- [illegible] solvent,
[illegible] mucous
[illegible] effective
[illegible] powder,
[illegible] cleans-
[illegible] and a
[illegible] S J.
Fearns assisted by W. J. Ford.

AMERICAN HOSPITAL SUPPLY CORPORATION

Chicago, Ill.
Booth 4

Key products for war use as well as hospital supplies and specialties of everyday character, will be on display in the Americ [illegible] new
ointme [illegible] ent
Derma [illegible] be
an im [illegible] ous
Solutio [illegible] her
produc [illegible] ge:
C. M. [illegible] rik-
son and J. E. Schutte

AMERICAN SAFETY RAZOR CORPORATION

Brooklyn, N. Y.
Booth 10

A S R Surgeon's Blades are known for their uniformity of performance, high quality and never deviating keenness Visit [illegible]

AMERICAN STERILIZER COMPANY

(Comper Division)
Erie, Penna.
Booth 7

[illegible] ill be given on the Albee-
[illegible] le devised by Dr. Fred
[illegible] the needs of war-time
[illegible] der war-time conditions.
[illegible] ude Skeletal Traction,
[illegible] Scoliosis Yoke, and the
L'Episcopo Head and Shoulder Rest will be demonstrated during the meeting, and maximum operative efficiency of the Albee-Comper Orthopedic Table, obtained with a minimum of surgical time and fatigue, will be shown.

Also, on display is the Comper Orthopedic Walker.

In charge: Messrs. Howard M. Fish, Adrian Comper, E. O. Lindberg, Fred G. Bauschard.

AUSTENAL LABORATORIES, INC.

New York, N. Y.
Booth 3

Vitallum, an alloy of cobalt, chromium and molybdenum is featured by the Austenal Laboratories Originally used in the manufacture of dental appliances, surgeons have found that Vitallum is completely inert in vivo, does not irritate the tissue nor interfere with normal bone regeneration, and has the requisite strength. In charge: J J Erdmann assisted by Katherine S. Hutchinson, George F Howland, William H. Soller.

BARD-PARKER COMPANY, INC.

Danbury, Mass.
Booth 30

The following prod [illegible]
Booth No 30 Rib-B [illegible]
dles for deep surger [illegible]
hyde Germicide and [illegible]
ceps; Hematological [illegible]
In charge. Carl A. W. [illegible]

BERLITZ SCHOOLS OF LANGUAGES

New York, N. Y.
Booth 5

Well educated men and women have for years been acquiring an ability to speak another language as a matter of course, but today professional persons as well as those engaged in industry and commerce have need of a second language, particularly in the growing relations with the South American countries.

The Berlitz Schools of Languages will have interpreters in their booth to assist the visiting members of the International College of Surgeons from Latin American and other countries. In charge: Miss Eunice Gray and Mr. Julio Vargas.

CAMEL CIGARETTES

(Medical Relations Division)
New York, N. Y.
Booths 25-26

Camel Cig [illegible]
equipment u [illegible]
brands of c [illegible]
sorption in [illegible]
[illegible] be seen while cig-
[illegible] rettes Representa-
[illegible] W Roberts.

CAMERON HEARTOMETER COMPANY

Chicago, Ill.
Booth 8

[illegible]

CAMERON SURGICAL SPECIALTY COMPANY

Chicago, Ill.—New York, N. Y.
Booth 36

The Cameron Surgical Specialty Company will show for the [illegible] Esophago-
[illegible] phing in
[illegible] Boilolite
[illegible] here will
[illegible] Binocu-
[illegible] gniscope,
Walton P. Smith, Eastern [illegible]
250 West 57th Street, N [illegible]

CANADIAN RADIUM & URANIUM CORPORATION

New York, N. Y.

Booth 38

At the exhibit of the Canadian Radium and Uranium Corporation, representatives will present to the medical profession advanced developments in radium medical appliances and other features of especial interest. This Company, as sole sales agent, offers high-purity Canadian radium at lowest prices, on sale or rental. Representatives will be glad to assist in individual studies of physicians' requirements. In charge: H. B. Kearney assisted by Boris Pregel, Alexander Pregel, J. S. Harris, Frank Hartman.

CARBISULPHOIL COMPANY

Dallas, Texas

Booth 33

Foille, an antiseptic, analgesic emulsion used in the field of burns and wounds will be displayed.

The company states that Foille treats a burn as a wound, effecting almost immediately a marked control of pain, and materially mitigates first shock. Forming a soft coagulum over denuded areas in contrast to a tough, tannic acid eschar, needed suppuration and drainage is permitted when required; free mobility of joint creases and extremities is afforded to reduce contracting scars; clinical history in the civilian, military and industrial field attests to material reduction of the recovery period. Represented by Don L. Sterling, Vice President, assisted by A. V. Hurd.

CIBA PHARMACEUTICAL PRODUCTS, INC.

Summit, N. J.

Booth 15

Ciba is planning to display the various pharmaceuticals of *their manufacture which have been found useful adjuncts to* the specialty of surgery.

Particular stress will be given to the recent work by Drs. Gunther et al. on "Intramuscular Pressure" which contains heir study of Coramine in the treatment of shock and shock- conditions. In charge: R. C. Mautner assisted by W. J. ns, A. Cooper, L. DeLuca.

CLAY-ADAMS COMPANY, INC.

New York, N. Y.

Booths 13-14

Exhibit: (1) The Herzmark-Adams Traction Reel, a new orthopedic device eliminating use of weights and pulleys and having a self-contained system for varying the weights by gears up to twenty pounds.

(2) Cacoprene (synthetic rubber, catheters, drains, and gastro-duodenal tubes), is their trademark product for surgical rubber goods made of a special formula of Du Pont Neoprene.

(3) An important part of the exhibit will be the medical teaching equipment.

(4) Surgical instruments, laboratory specialties and the newest model of the Adams Senior Safety-Head Centrifuge. In charge: Harry Roth assisted by Emil Davidson, L. T. Hilborn, A. W. Lamm.

CONTACT LENS SERVICE

New York, N. Y.

Booth 32

The Company will demonstrate the wearing of the lenses and exhibit different types of lenses used both as aids to vision and for cosmetic effects, showing the value in the cases of extremely high myopia and keratoconus.

There *will be a demonstration of moulding* to show what actually takes place during the process. Patients wearing the lenses will be present. Represented by Gertrud Salvatori.

DAVIS & GECK, INC.

Brooklyn, N. Y.

Booth 34

Davis & Geck, Inc., will display its complete line of sterile sutures including fine gauge (0000 and 00000) catgut; a comprehensive group of sutures armed with swaged-on Atraumatic needles designed for specific surgical procedures; Dermalon skin and tension sutures (processed from nylon) which, because of marked physical advantages and economy, are rapidly replacing *silk-worm* gut and other *non-absorbable* materials.

A representative from the laboratories will be in attendance at the booth and copies of the "Manual of Surgical Sutures and Ligatures" and other interesting booklets will be available. *In charge: J. Cameron Stuart.*

THE DENVER CHEMICAL MFG. CO.

New York, N. Y.

Booth 37

The Company will exhibit Galatest, a dry reagent for the instantaneous detection of urine sugar. It is claimed to be accurate, simple, speedy and economical, and used routinely by many leading hospitals and medical departments of industries, and by more and more private practitioners every day. In charge: Frank A. Brooks, Miss Helen I. Creelman, R.N.

DOHO CHEMICAL CORPORATION

New York, N. Y.

Booth 23

The Auralgan Exhibit consists of a model of the human auricle, *four feet high*, together with a series of twenty-four three dimensional ear drums, modelled under the supervision of outstanding otologists. Each of these drums depict a different pathologic condition based upon actual case observation and prepared in so far as possible, with strict scientific accuracy so as to be highly instructive and interesting to all physicians. In charge: Herbert R. Steinman, Harry Mendelson, Dr. Walter von Horst.

THE GILLILAND LABORATORIES, INC.

Marietta, Penna.

Booth 42

We will exhibit some of the biological Products in which we specialize. These include Antitoxins, Sera, Toxoids and Vaccines for treatment and prevention of Cholera, Diphtheria, Dysentery, Gas Gangrene, Tetanus, Typhoid Fever, Smallpox and many other diseases.

You are cordially invited to visit our booth and your inquiries will be handled by the trained personnel in attendance.

J. E. HANGER

New York, N. Y.

Booth 6

The Company will show models of the latest type metal and willow artificial legs and various types of artificial arms. Limb wearers will be in attendance to give actual *walking* demonstrations. The improved safety automatic knee lock for above knee amputations will be on display. Data will be distributed indicating the most desirable points of selection from the standpoint of successful prosthesis. In charge: William J. Ferris, Jr.

INTERNATIONAL COLLEGE OF SURGEONS

Chicago, Ill.

Booth 2

Members of the College and visitors are cordially invited to stop and chat with our representatives, to leave their professional cards and to meet with their colleagues.

JOHNSON & JOHNSON

New Brunswick, N. J.

Booth 21

The Ethicon Suture Division of Johnson & Johnson will show many new items. Included will be special purpose sutures with swaged-on needles for use in eye, nerve and other surgery, as well as stay sutures and nylon and silk in fine gauges. Of special interest to urologists, gynecologists and orthopedic specialists, as well as to general surgeons, will be the tubes of sterile fascia lata in strips and in sheets.

The phenomenal advancement in available suture materials and in operative procedure since the Listerian period, are interestingly portrayed in the Johnson & Johnson film "Sutures Since Lister." Opportunity for viewing this sound film will be afforded at the Convention. A copy of their book, "Operative Procedure," may be obtained. In charge: H. M. Hirschhorn, J. W. Smith, L. L. Allen, T. W. Mee.

JOURNAL OF INTERNATIONAL COLLEGE OF SURGEONS

Chicago, Ill.

Booth 1

The Journal of the International College of Surgeons will be distributed at our booth. The Proceedings of the Third International Assembly of the College will be on display.

LYDIA O'LEARY, INC.
New York, N. Y.
Booth 35

The Lydia O'Leary Covermark exhibit will show the professional use of this preparation for concealing the discoloration of post-operative scars, as well as permanent or temporary skin blemishes Application of Covermark will be demonstrated in our booth, and literature and professional samples will be available.

T. H. McKENNA, INC.
New York, N. Y.
Booth 39

A complete display of the new and standard books of all medical publishers will be exhibited In the belief that it will be a convenience to be able to examine the books of all publishers in one joint exhibit, the various publishers have cooperated in the arrangement of the exhibit One of the books to be shown will be the revised edition of "Surgical Errors and Safeguards" by Dr Max Thorek T H McKenna assisted by Gilbert Miller and Frank Kettles

MEDICAL FILM GUILD
New York, N. Y.
Booths 18-19-20

The Medical Film Guild will emphasize its talking papers in this year's program of MEDICAL FILMS THAT TEACH." Hospital and Medical Society program chairmen, now faced with depleted staffs because of the war emergency, who desire educational material for their meetings, find that Medical Film Guild's motion picture film text books lessens that important problem.

The following films will be shown in the booth of the Guild: Inguinal Herniplasty—Symposium on Suturing Technic, Asphyxia Neonatorum, Non Operative Treatment of Paranasal Sinusitis, Otitis Media in Pediatrics, A Clinic on Acute Mastoiditis, Otoscopy in the Inflammations A Clinic on Petrositus with Meningitis, A Clinic on Sigmoid Sinus Thrombosis Pharmacology of Respiratory Stimulants, Sutures since Lister

PHILIP MORRIS & COMPANY LTD. INC.
New York, N. Y.
Booth 9

Philip Morris & Company will demonstrate the method by which it was found that Philip Morris Cigarettes (in which diethylene glycol is used as the hygroscopic agent), are less irritating than other cigarettes Their representative will be present to discuss researches on this subject, and problems on the physiological effects of smoking Representative L Ralph E Hansen.

NOVOCOL MANUFACTURING COMPANY
Brooklyn, N. Y.
Booth 11

This Company states that its efforts are devoted to research and perfection of local and spinal anesthetics only After years of research the new safer anesthetic MONOCAINE was introduced in 1937

AMYLCAINE HCL 4% solution used by instillation is said to possees superior qualities over many other ophthalmic anesthetics.

NOVAMUL, used by otolaryngologists plastic, orthopedic and general surgeons, proctologists and anesthetists is easily loaded into the all metal, unbreakable, sterilizable syringe NOVAMPULS offer the surgeon the advantage of direct injection of the sterile anesthetic solution without the need of aspirating the solution from an ampule or bottle In charge Dr Hillard B Nevin, Morris Kermater, Nathan Pearson

OBRIG LABORATORIES, INC.
New York, N. Y.
Booth 41

Contact lenses are being used increasingly to rehabilitate persons who have had corneal injuries After the war there will be greater need for these devices to help restore vision to men who have received corneal wounds

The Obrig Laboratories will exhibit contact lenses, gonioscopic lenses, microscopy lenses tinted lenses and materials for making impressions of the eyes, as well as the equipment for the fitting of contact lenses

The all-plastic unbreakable contact lenses are 60 per cent lighter than glass lenses, they are inert and easily adjustable and can be ground and polished to any correction In charge: Theodore E Obrig, Philip L Salvatori

THE PIONEER RUBBER COMPANY
Willard, Ohio
Booth 12

Rollpruf Surgical Gloves in natural and Synthetic Rubber, Quixams, the short either-hand glove for examinations and Conservors, regular length either hand glove for surgery, will be featured In charge Ken L Milligan, H. B Bernstine.

SCHERING CORPORATION
Bloomfield, N J.
Booth 31

Physicians will be interested in the exhibit of the Schering Corporation which features pure crystalline hormone preparations Representatives of the corporation will be present to discuss indications and therapeutic application of many Schering hormones such as Progynon, Oreton, Proluton, Pranone, Anteron, Pranturon and Prolactin Physicians will also have an opportunity to hear about the experimental research now in progress and the encouraging results achieved with sex hormones in certain constitutional disorders previously not considered to be in the realm of endocrine therapy.

The new diagnostic medium for cholecystography, Priodax, will also make its appearance at the Schering booth. This agent is completely different from all other gallbladder media in that it is chemically unrelated to phenolphthalein or its derivatives Its main attributes are the extremely low incidence of nausea and vomiting, and freedom from severe diarrhea The cholecystograms obtained have been found to be equal and even superior to those which result from sodium tetra iodo phenolphthalein "dye" preparations

Demonstration of a new and effective technic for the sublingual administration of Cortate (desoxycorticosterone acetate) should prove most interesting This significant advance in oral hormone therapy is achieving recognition in many clinics Investigators report that sublingual therapy is the simplest, most effective and most economical method of administering the "survival hormone."

In addition to literature dealing with sex hormone preparations, the most recent data on the treatment of rheumatoid arthritis with Solganal-B Oleosum (aurothioglucose) may be obtained A distinguished gold salt exhibiting maximum efficacy and minimal toxicity, Solganal B Oleosum provides most favorable results in the treatment of a hitherto intractable condition

J. R. SIEBRANDT MFG. COMPANY
Kansas City, Mo.
Booth 24

The Goodwin Bone Clamp simplifies the technique for open reduction of long bone fractures With this Clamp the bones are easily aligned, and when wiring fractures, the entire operation from drilling holes to the tightening of the wires, is all done with this instrument and a few accessories The Drill Guide and calibrated lock stem control direction and depth of drilling, indicate diameter of bone, and calculate the correct length of screw to use for applying Bone Plates See this Clamp, also a complete line of Splints, Fracture Equipment and Bone Instruments

SINGER SEWING MACHINE COMPANY
New York, N. Y.
Booths 16-17

Specially trained demonstrators will exhibit the new Singer Surgical Stitching Instrument This instrument, developed in close cooperation with the surgical profession, has attracted much attention in several recent medical conventions, and clinical trials have demonstrated its success and practicability

All Doctors, nurses and hospital staff members are invited to see this unique contribution to surgery

Motion pictures of operations showing the instrument in use will be shown, and free literature describing the instrument in detail will be available Represented at this Assembly by Mr J P Weis or Mr L C Molloy and demonstrators.

THE TOWER COMPANY, INC.
Seattle, Washington
Booth 22

The Tower Company, manufacturing and research specialists in fracture equipment, presents the latest,—the new Military Mobile Frac-sure Unit This equipment represents a new and approved approach to fracture treatment designed to meet the particular requirements of the most exacting fracture services The equipment to be shown meets with the latest specifications of the military fracture services. Several new items of particular interest to the orthopedic surgeons are being exhibited for the first time. Also, on display will be the new Tower Company Mandible Fixation with spec

Intertrochanteric Unit, and additional standard fracture equipment. Representatives: Leslie C. Wilkins, Seattle, Wash.; Harold M. Poole, Miss Anne Cowan, New York City.

WHITE LABORATORIES, INC.

Newark, N. J.
Booth 40

White Laboratories, Inc., presents its complete line of ethically promoted, clinically reputable, vitamin preparations. Attention is particularly invited to White's Vitamin A and D Ointment and White's Ophthamol Vitamin A and D Ophthalmic Ointment. Qualified representatives will be in attendance to discuss the use of White's products in vitamin prophylaxis and therapy. Descriptive literature is available for review, and a cordial welcome awaits the physician. In charge: A. F. Oustard assisted by Fred Stelling, L. F. duBuse, L. B. Pinkerton and G. P. Reinberg, Export Manager.

WISCONSIN ALUMNI RESEARCH FOUNDATION

Madison, Wisconsin
Booth 29

Of special interest to surgeons visiting our exhibit will be the information on Dicumarol, the new anti-coagulant on which reports on more than 1000 patients have now been received. This drug is administered orally, is low in cost, produces a sustained effect, and has proved highly efficacious in the prevention of post-surgical thrombosis and embolism.

Also featured will be Copper-Iron compounds for pre- and post-operative use in hemoglobin generation; stabilized iodized table salt which retains the iodine content; and various Vitamin D milks and foods prepared through the use of the Steenbock Irradiation Process. C. P. Segard, M.D., of the Foundation's New York office will be in charge of the exhibit.

WALLACE & TIERNAN PRODUCTS, INC.

Belleville, N. J.
Booth 27

Wallace & Tiernan Products, Inc., Belleville, N. J., will show Azochloramid (Chloroazodin U.S.P.), a Council Accepted, effectively bactericidal organic chloramine of low toxicity for the treatment of wound infections. Full-color motion pictures of several interesting surgical technics and procedures including plastic, orthopedic and general surgery will be shown. Visit our booth and register. Our representatives will welcome you.

REGISTRATION

Begins Sunday, June 13, 1943 at 2:00 P.M.
Registration desk will be located in the Silver Corridor Room
of the Waldorf-Astoria Hotel
All Delegates, Members of the Committees on Arrangements
and all others in the City of New York are requested to register on that date
Everyone expecting to attend the Assembly must register.
Registration fee, $3.00
Men in uniform will not be charged a registration fee
Visting ladies are also asked to register

HOUSE OF DELEGATES

of the International College of Surgeons and of the

UNITED STATES CHAPTER

will meet during the Assembly at the Waldorf-Astoria Hotel
For information see Bulletin Board in College Booth

CONVOCATION

See announcement Bulletin Board College Booth
Waldorf-Astoria Hotel, Tuesday, 5:00 P.M.

TECHNICAL & SCIENTIFIC EXHIBITS

Jade Room and Astor Gallery

MILITARY & REHABILITATION EXHIBITS

East Foyer

MOTION PICTURES

West Foyer

DINNER

Sert Room, Tuesday, June 15, 7:00 P.M.
(Dress Optional)

BOOK REVIEWS

First Aid: Surgical and Medical. By Warren H. Cole, M.D., F.A.C.S., Professor and Head of Department of Surgery, University of Illinois College of Medicine, and Charles B. Puestow, B.S., M.S., M.D., Ph.D., F.A.C.S., Associate Professor of Surgery, University of Illinois College of Medicine. 351 pp., 92 fig. $3. D. Appleton-Century Co., Inc., New York, 1942.

THIS book is written primarily as a text on first aid for the medical student, although it may also be used as a manual for laymen beyond the primary first aid course. Designed for emergency treatment in war, the principles involved are equally applicable to civilian life. Differences are pointed out in civilian and military treatment of emergencies.

The first chapter of the book is set in larger type than the remainder in order to further emphasize the precautions to be taken in, and the limitations of, first aid work. Non-glare paper and large, clear print make this book particularly readable.

A brief, concise chapter on anatomy and physiology offers an excellent background for the discussion of first aid. Various contributors consider such subjects as wounds, shock, blood transfusions, methods of transportation, injuries to the skull and spinal cord, injuries to the large blood vessels, respiratory emergencies and medical emergencies, gas and bomb raids.

This is a practical, well-outlined, clearly written text, amply illustrated by original line-drawings. It can be well recommended to advanced students in first aid, and to the physician who has not practiced first aid procedures.

P. T.

American Surgeon Abroad. By Richard A. Leonardo, M.D., Ch.M., F.I.C.S. $2.50. Froben Press, New York, 1942.

THE author describes in scholarly manner his own pre-war experiences as a student in many European medical centers. He speaks appreciatively of the benefits he derived from his several sojourns abroad, and advises the American doctor to plan for post-war study as a valuable adjunct to his medical training in this country.

One's point of view is broadened by visits to other centers of learning. This book should prove of value to all interested in contemporary surgical activities.

M. T.

Treatment in General Practice. By Harry Beckmann, M.D., Professor of Pharmacology, Marquette University School of Medicine, Milwaukee, Wisconsin. Ed. 4, 1015 pp. W. B. Saunders Co., Philadelphia, 1942.

THE chapters covering sulfonamide therapy and nutrition, the two outstanding therapeutic advances, have been brought up to date.

One of the most helpful chapters is that on "Deficiency Diseases," in which vitamin deficiencies and specific vitamins to be used in their treatment are thoroughly described. One might criticize the emphasis which is placed on synthetic proprietary preparations. Many practitioners prefer to prescribe t vitamins in their natural state and, therefore, wo welcome a dietary table listing the vitamin contents various foods, or such a simple aid as the Daily Fo Guide compiled by the National Nutrition Committe

An extensive and thorough revision of this standar work on treatment encompasses much new materia which, however, seems to have been thrown together in haste. Overlapping of subject matter treated by various authors and frequent typographic errors detract from the readability of the volume.

The volume is, however, valuable for reference purposes, due to its comprehensive nature.

S.

Diseases and Injuries of the Larynx: A Textbook for Students and Practitioners. By Chevalier Jackson, M.D., Sc.D., LL.D., F.A.C.S., and Chevalier Jackson, A.B., M.D., M.Sc. (Med.), F.A.C.S. 592 pp., over 200 fig., 11 colored plates. $8. The Macmillan Co., New York, 1942.

A BOOK of practical information on the larynx is this latest edition of the Jacksons' work, based on an extensive clinical experience. Particularly valuable is the authors' experience in industrial and accident surgery, which forms the basis for an excellent chapter on war injuries.

Perhaps the most important omission is that of the use of chemotherapy in treating the wound after a laryngectomy.

The book contains much practical information and should find a place in the library of all laryngologists.

M. T.

Autonomic Regulations: Their Significance for Physiology, Psychology and Neuropsychiatry. By Ernest Gellhorn, M.D., Ph.D. Interscience Publishers, Inc., 373 p., 80 fig. $5.50. New York, 1943.

A THOROUGH discussion is given of the regulations of the autonomic nervous system, based on laboratory investigations by the author and his collaborators, concerning the functioning of the organism under a variety of conditions. The study is made from the point of view of organismic physiology, i.e., under the assumption that the various alterations observed serve a biological purpose and represent adjustment reactions which have been adopted and developed under conditions of stress and strain, during th various stages of phylogenetic evolution.

Since the cortex of the brain is most sever affected by changes in the external and internal n and its faculty of adjustment is minimal, the t the autonomic system consists in protecting th tex from harmful alterations of the internal ment by altering circulation and respirati production and heat lost, change in blood vo erythrocyte content.

Two chapters are dedicated to the auto crine and autonomic-somatic integration, consideration of the autonomic basis Studies of reactions to carbon dioxide asphyxia, hemorrhage and hypogl only as examples of physiological adjustment, but throw important light on pathological processes, especially in neuropsychiatry. Schizophrenic patients exhibit a decreased reactivity of the sympathetico-adrenal system as well as a relative preponderance of the vago-insulin system. It seems that the different methods of treatment of schizophrenia, such as convulsions induced by metrazol, insulin, picritoxin and electrical currents or artificial fever, though profoundly differing in their effects on metabolism, brain circulation and cortical potentials, have one factor in common, namely that they stimulate the sympathetico-adrenal system, and by restoring the disturbed autonomic balance exert far-reaching effects on the cortex itself.

Alexander Haase, M.D.

Military Surgical Manuals (National Research Council) Abdominal Injuries. 131 p. W. B. Saunders Co., Philadelphia, 1942.

THE purpose of the Military Surgical Manuals, according to the preface written by Surgeon General I. C. Magee and E. T. McIntire, is a double one: Surgeons who have specialized in a certain field are to be taught the therapeutic principles *in the fields outside of their up-to-date activity.* The second aspect is to acquaint the not sufficiently trained physician with surgical indications and technics.

It is difficult to serve both these purposes, the authors have not attempted to do so; they probably figured that every specialist in surgery has or should have a large basic training in general surgery. Since generally surgery practically is tantamount to abdominal surgery a rather thorough knowledge of the pathology and technic in abdominal surgery is expected. The book was not written for the specialist in surgery who is only superficially or not at all acquainted with abdominal surgery. Nor was the book written for the surgically inexperienced physician.

That a treatise serving its purpose was produced with the cooperation of fourteen well-known surgeons of the U.S.A., does not have to be mentioned or proved. Therefore—with regard to the vital importance of this book in the present war—the review is a critique of several details.

Among the subparietal wounds the typical and important tear of the first jejunal loop occurring in accidents of overrunning is not mentioned. The auscultation of the abdomen as a diagnostic means in progressive peritonitis is underestimated.

Among the roentgenologic examinations the information which can be obtained from the radiograph on progressive gas phlegmone in the retroperitoneal space is missing; so is an indication to skin emphysema.

The significance of peritoneoscopy in the diagnosis of visceral perforation in the opinion of the reviewer appears to be overemphasized. One should be warned not to dissect the cartilage in resecting the costal arch for the exposure of the liver surface. If the wound is infected, the well-known chronic suppuration of the cartilage may develop.

The presentation of mortality in relation to the operating time is very instructive.

The assumption that small injuries to the œsophagus frequently are not followed by extravasation of gastric contents may be correct. Contents of the œsophagus, however, are no less infectious, and we may be permitted to question the statement that "they may heal spontaneously."

In a complete separation of the esophagus, the abdominal access may not be satisfactory for an implantation of the end of the esophagus has the tendency to retract into the mediastinum; its end can only be reached through the thoracic cavity.

Among the technics for stoppage of bleeding in bullet wounds of the liver the pulling-through of a lappet of the omentum should be mentioned.

It seems to be too one-sided to mention the "endoaneurysmoraphy or ligations" as the only methods for the treatment of aneurysms of the iliac vessels.

The first of the general principles for the management of the abdomino-thoracic injuries is disputable: bullet injuries of the right side may very well affect other organs besides the liver, even if the bullets are of small caliber: colon, gall bladder, duodenum. Therefore, the statement "active surgical treatment may not be required unless there is evidence of continuing hemorrhage" is open to criticism.

The statement that after the care of the intrapleural injury "the chest often can be closed without drainage" gives the impression that an open drainage may be considered at all.

Figure 47 shows "approaching the posterior subphrenic space for draining abscesses" after resection of the twelfth rib. The rib-resection according to the experience of the reviewer offers no definite advantage. Only the disadvantage that in careless operating in the paravertebral angle the pleura may be injured.

In the chapter on anesthesia, chloroform was not mentioned. Should its application not be considered occasionally when mass operating is necessary?

Injuries of the internal fc [illegible] especially the uterus, are not [illegible] the bomb injuries of th [illegible] this should be looked upon as a [illegible] ook.

R. N.

Fundamentals of Immunology. By William C. Boyd, M.D. 446 p., 45 fig. Interscience Publishers, Inc., New York, N. Y., 1943.

THE author has presented the basic concepts of immunology as they are interpreted today. Historical aspects where they definitely further modern knowledge are briefly discussed. The book is divided into chapters dealing with accepted phases of immunology such as antibodies, antigens and antigen-antibody reactions. Special emphasis is given to certain types of antigen-antibody reactions such as the complement fixation test and allergic phenomena. Two chapters of special interest deal with the modern concepts of blood groups, and with laboratory technic in serologic reactions.

The book is remarkable for its brevity, clarity, and comprehensiveness. Although in the main the reader is left with a satisfied feeling of having crystallized certain bits of knowledge gleaned here and there, it must be expected that any comprehensive treatment of so wide a subject, when done briefly, must have certain inaccuracies. This is apparent in many controversial issues touched upon in the chapter on allergy and immunity. A chapter on the "Practical Uses of Artificial Immunity" will be of particular interest to the student and the practitioner.

On the whole, Dr. Boyd has written a book that may be highly recommended for its clear and concise reporting of a subject as diverse as immunology.

I. S. N.

Surgery of Constipation. By Conrado Zuckerman, M.D., Professor of Surgical Pathology in the Faculty of Medicine of Mexico. 189 p., 32 fig. Manuel Leon Sanchez, Mexico, D F.

THE author believes that in the management and treatment of constipation, the physiotherapeutist and the surgeon have to collaborate with the internist and practicing physician in many cases of chronic constipation.

The cure of such a complaint means the return to efficiency of members of society, as well as the prevention of the development of other ailments (lesions and organic diseases, even cancer). The author has studied the syndrome of constipation for many years and has reached the conclusion that it is the cause of many ailments, and he has observed that medical and physiotherapeutic measures, though scrupulously carried out, have failed of satisfactory results

With conciseness and clearness, the author lays down the basic knowledge of the anatomy and the physiology of the intestinal tract, with especial reference to the colon, and categorically treats the various lesions underlying the phenomena of acute and chronic constipation in general. After defining his concept of this common disorder he discusses surgical constipation and its treatment.

A comprehensive discussion of intestinal denervation, sensibility and motility of the colon, and of the neurosurgery of constipation and colonic pains is of special interest.

Dr. Zuckermann's observations and the synthesis of his findings, as well as the physical considerations under which he concludes his valuable monograph merit the attention of the general practitioner, the internist and the surgeon.

DESIDERIO ROMAN, M.D

Clinical Anesthesia. By John S. Lundy, B.A., M.D., Head of the Section on Anesthesia, Mayo Clinic; Professor of Anesthesia, Mayo Foundation for Medical Education and Research, Graduate School, University of Minnesota. 771 pp., 266 fig. $9. W. B. Saunders Co., Philadelphia, 1942.

A REAL encyclopedia of anesthesia has been given to the medical profession by the author, covering the material with which a qualified anesthetist should be familiar, including not only methods used in administering anesthesia, but also criteria for the selection of anesthetic agents and methods. Theories are almost eliminated, and surgeons, as well as anesthetists, will appreciate the book. A wealth of tables is one of the highlights of the book. The author bases his work on 1,200 cases, which are especially instructive

Regional, endotracheal and intravenous anesthesia are treated particularly well. Postoperative care is given especial attention Possibly too much space is alloted to the barbiturates and too little to absorption anesthesia. Other information on ‘‘Intructions to Physicians, Dentists, Nurses and Assistants,’’ and ‘‘Equipment and Drugs Used in Anesthesiology’’ has been placed in separate chapters.

Venipunctures, intravenous therapy, resuscitations and oxygen therapy are also included.

This valuable book contributes much to the field of anesthesia.

The Answer Is—Your Nerves. By Arnold S. Jackson, M.D., with a chapter by the Rev. Edwin O. Kennedy. 197 pp. $2. Kilgore Printing Co., Madison, Wisconsin, 1942.

THE author, who is extremely well qualified by virtue of an excellent preparatory foundation and an active scientific mind, presents a treatise on one of the most important problems confronting the profession, regardless of specialty. These problems, too frequently, are relegated to the unimportant, with a diagnosis of hysteria or neurasthenia. Such action often permits permanent injury to the patient who falls into the hands of the unscrupulous physician or surgeon, who permits the patient to indulge in ‘‘isms,’’ is giving material aid to the ever-rising opposition to present-day medical practice.

Many case histories are presented, together with his method of analysis and cooperative treatment with the patient. Because the book is written in simple English and marked clarity, it can be used by the physician as an adjunct to his recommendations. The written word is always given more thought than the spoken word. The presentation is so distinct that the very act of reading produces relaxation which, in itself, has value to both physician and patient.

Aside from its direct value, the following paragraph presents facts to the reader which the profession has spent years in trying to obtain public acceptance. ‘‘If people would only stop to consider the years of required preliminary work, followed by hours of daily reading, study and constant practice necessary for the development of a competent physician or surgeon, they would cease trusting their lives, and the lives of those who are dear to them, to the hands of second rate imposters.’’

The illustrations by Evelyn Lipman are truly American. They over-emphasize to produce their point—a lesson from Hollywood.

Rev. Edwin O. Kennedy, in the chapter on ‘‘Religion and Nerves,’’ accepted a grave responsibility on a most sensitive subject. The presentation should prove of great value to the minister who desires to cooperate with the physician in the many cases that require the services of both. Too frequently this phase of medical practice has been neglected.

The book has a definite place in the armamentarium of the busy physician.

B. I. GOLDEN.

When Doctors Are Rationed. By Dwight Anderson, Director Public Relations, Medical Society of the State of New York, and Margaret Baylous, Therapist, Charleston General Hospital, Charleston, West Virginia. 250 pp. $2. Coward-McCann, Inc., New York, 1942.

THE authors state that doctors must be rationed, not only to supply the need for them in military service, but also to provide essential medical care for the civilian population in certain localities which may be left doctorless by the war. Doctors might be assigned to such localities for the ‘‘duration.’’ A system for the rationing of doctors is suggested.

The book is written without any prejudicial slant, either toward existing governmental or medical institutions.

The importance of the Departments of Public Health in preventing disease in wartime is pointe out, and the layman is warned agai and quacks arising fr me edical f

A Surgeon's Fight to Rebuild Men. By Fred H. Albee, F.A.C.S., F.I.C.S., Dutton, 1943.

DOWN in Maine, young Fred Albee's forebears were salt-bitten sea captains. His maternal father, former ship carpenter, became an expert grafter of fruit trees. A neighbor, driving fast horses across the countryside on errands of mercy, inextricably linked, in the boy's mind, medicine and romance.

The special direction his career would take was set when the boy helped Grandfather Houlette perform the homely miracles that made sweet apples grow on sour apple trees. The special tools which he would need to invent—the intricate and ingenious parts of the Albee Bone Mill—were prefigured in the boy's *home-made circular zinc saw which sliced only* rutabagas. And the self-reliance, the willingness to pioneer, the bent for quick, decisive action which a surgeon must have—the Albee sea captains passed those gifts to their son and the stern simple discipline of a Maine childhood helped to toughen their fiber.

To an extent unusual and enviable in a confused world, the story of Dr. Albee's life has the inevitableness of great art. Everything fits with the precision of one of the Doctor's own bone grafts. That is one reason why this modest and simple record of one man's fight for human wholeness has the dramatic appeal of a good novel as well as the fascination of a scientific record.

The narrative, which only briefly touches the days since our old world's end in 1939, has *nevertheless cogent timeliness.* One third of the book is given to the period of World War I, in which modern medicine and surgery, pitted against modern mechanized warfare, developed many of those technics and skills which now again become of desperate importance behind the terrible battle lines of World War II.

Dr. Albee's contribution in that war was stupendous. It was a war, he writes, in which 65 per cent of the cases treated, called for surgery of spine and bones and joints. Working in the French hospitals at Ris-Orangis and elsewhere and in the U. S. General Hospital No. 3 at Colonia, N. J., which he organized and directed, Dr. Albee performed countless operations which sent men back into peace-time living with whole limbs, and unmutilated faces. Dr. Albee's work in bone surgery, fortunately for thousands of soldiers in that war, had won wide recognition before war came. Other surgeons were ready to do their share in the work of salvage because Dr. Albee had prepared them. The "use of the bone graft concept," he writes with *matter-of-fact* succinctness, "saved enough limbs to fill a large building . . . " Dr. Albee saw the closing of General Hospital No. 3, in 1919, not as the end of his work of reconstruction but as the beginning of a new phase of it.

Only 4,000 Americans, he noted, required limb amputations in World War I, but 30,000 industrial workers require such operations annually. He noted too that the automobile was becoming a far more effective instrument of mutilation than the bomb. If it is important to check human waste upon the battlefield in those infrequent holocausts we call war, how much more important to eliminate insofar as possible the human scrap heaps constantly piled up in times of peace. The story of Dr. Albee's work as chairman of the New Jersey State Rehabilitation Commission is the record of a great social and surgical achievement.

There is much more in Dr. Albee's rich and fascinating biography—his efforts to use the fraternity of science to help build international good will between the Americas; his adventures in land and in health in Florida; his current work in the rehabilitation of men rejected in the draft; his prowess as a fisherman—all together, they contribute to the picture of a full and vigorous life, with achievements already attained and many achievements still ahead.

H. V.

Surgical Clinics of North America. August, 1942. Volume 22. Number 4. 298 pp. Cloth $16. Paper $12. Issued serially, *every other month (6 consecutive bimonthly numbers).* W. B. Saunders Co., Philadelphia, 1942.

AN EXCELLENT symposium on industrial surgery makes this issue of the "Surgical Clinics" particularly valuable to the general practitioner in an industrial neighborhood, as well as to the specialist in industrial surgery.

Authorities in their fields discuss such widely varying topics as the management of craniocerebral injuries, fractures of various parts of the body, chest injuries, hernia in industry, relations of the general physical condition to industrial accidents, disability periods and schedule losses, injuries of the face and shoulder girdle, treatment of infected wounds in compound fractures, burn therapy and fluoroscopy in industrial surgery.

Contributors include Dr. Hart E. Fisher, Chief Surgeon and Medical Director of the Chicago Rapid Transit Company; Dr. Harry E. Mock, Dr. Thomas D. Allen, Dr. Earle H. Thomas, Dr. Nelson J. Howard, Dr. John S. Coulter, Dr. H. W. Orr, Dr. James T. Case, and Dr. Grover C. Penberthy.

P.

Shock: Its Dynamics, Occurrrence and Management,Virgil H. Moon, A.B., M.Sc., M.D., Professor of Pathology, Jefferson Medical College, Philadelphia, 324 p., 36 fig. $4.50. Lea & Febiger, Philadelphia, 1942.

THIS complete study of the condition of shock does much to clarify the mechanism, recognition, occurrence, prevention and treatment of the condition. So much has been done experimentally, and so much has been written on the subject in the last 10 years, that it has been very difficult for most men in the profession to keep up with the voluminous amount of literature which has resulted. This volume has covered that literature quite exhaustively and a handy listing of references will be found between pages 295 and 317. Time has not been wasted by going into too much detail, but rather a clear, concise summary of the contributions has been very well presented. The book has been divided into two parts, the first dealing with the vascular dynamics, and the second exclusively with the practical phases, such as prevention, recognition, diagnosis and treatment of shock. Many interesting photomicrographs are presented, which stress and amplify the points which the author makes. It is an excellent volume dealing with an important subject and can be highly recommended.

P. T.

Advances in Internal Medicine. Volume I. By J. Murray Steele, M.D., Welfare Hospital, New York University Division, Welfare Island, New York. 292 pp. $4.50. Interscience Publishers, New York, 1942.

THIS is the first volume of a series to appear from time to time dealing with important advances in internal medicine, discussed by authorities in various fields. There are seven associate editors and ten contributors to the volume.

Ten papers discuss the use of the Miller-Abbott tube; the use of insulin and protamine insulin in diabetes; sympathetic nervous control of the peripheral vascular system, the sulfonamides and infections of the urinary tract; trends in the study of influenza; hypertension; nephrosis; and riboflavin deficiency.

Each subject has been elaborated sufficiently to be informative, yet it is handled in simple style. Brief summaries at the end of most articles, and bibliographies varying from 25 to 200 references, make this a handy guide to the fields of progress in internal medicine.

MAX THOREK.

The Sexual Glands of the Male. By Oswald Swinney Lowsley, A.B., M.D., F.A.C.S., with collaboration of Frank Hinman, A.B., M.D., F.A.C.S., Donald R. Smith, A.B., M.D., and Robert Gutierrez, A.B., M.D, F.A.C.S. Reprinted from Oxford Loose-Leaf Urology. 746 pp., 59 fig. $10. Oxford University Press, New York, 1942.

THE great advances of the past decade in our knowledge of the male sexual glands are considered at great length in this interesting volume. The prostate, at one time regarded principally as a urinary organ, and now definitely recognized as a sexual gland, is dealt with in the first third of the volume and is considered from every possible angle, beginning with its embryology and ending with the surgery of its pathologic conditions. The interrelationship between the prostate and the testes and the hypophysis, and their hormonal balance, are fully considered.

It is to be expected that considerable attention would be given to the subject of prostatic carcinoma and its treatment. Transurethral resection, which seemed so promising when first introduced, is no longer approved by the author (Lowsley), because the electric current favors the development of necrosis and persistent infection and speeds up the growth of the remaining malignant tissue. He advocates, instead, conservative perineal prostatectomy, followed by radon seed implantation through the perineal incision. Treatment of prostatic carcinoma by orchiectomy, as advocated by Huggins and his associates, is given but a few lines, to the effect that the claims regarding the beneficial results are "in no way exaggerated."

The second part of the work is devoted to an excellent consideration of the testes and epididymes by Frank Hinman and Donald R. Smith.

With his accustomed thoroughness and ability, Gutierrez completes the volume with his interesting contribution on the seminal vesicles, ampullæ, vasa deferentia and spermatic cord.

This book will prove of inestimable value to the surgeon, the general practitioner and the urologist as well. It is difficult to realize the great progress that has taken place in the field of sexual urology until one has read this interesting and instructive work. The distinguished authors and their publishers are to be congratulated on a most valuable addition to the literature on the subject.

A. L. WOLBARST.

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*Rank unknown to editor; kindly notify.

Experiences at the Naval Hospital, Pearl Harbor during and after the Japanese Air Raid of December 7, 1941*

CAPTAIN REYNOLDS HAYDEN, MEDICAL CORPS, U. S. N.
NAVAL HOSPITAL, PEARL HARBOR, HAWAII

EIGHTEEN months have passed since the surprise Japanese air raid on Pearl Harbor, an attack which was typically Japanese in thought and execution, which finally pushed us into the second World War and which was to have a markedly serious effect upon the allied war effort in the Pacific Ocean and Asia.

Pearl Harbor is no longer on the front pages, but it will never be forgotten by the American people and will go down in history alongside of Bunker Hill and Valley Forge.

We all know now what those of us at Pearl Harbor knew that December 7, that if Japan had been prepared to follow up the raid, she could have taken the Hawaiian Islands and gone on to attack our west coast or the Panama Canal. Like Germany at Dunkirk, Japan really failed at Pearl Harbor through not being prepared for success.

While a great deal has been published about the raid, the naval hospital there went through an experience which was a very concrete example of what may occur at any hospital in an area subject to air raids, an experience which largely revolutionized and stabilized the treatment of war wounds and burns. While the tremendous pressure of work in caring for casualties under air raid conditions can only be experienced, not told, it is believed that a description of the activities at the Naval Hospital, Pearl Harbor, on that fateful December 7 will be of interest to all and perhaps of assistance to some in handling a similar situation elsewhere.

Speaking medically, the air raid on Pearl Harbor had three very unusual features. These were: first, the great number of casualties received at the hospital in a short period of time; second, the fact that many patients had been overboard and were covered with fuel oil; third, the very high percentage of burn cases.

As you know, the enemy air raid on Pearl Harbor was a great surprise to us all. It occurred shortly before eight o'clock on a beautiful, quiet, peaceful Sunday morning such as is seen in any small town in the United States.

I was in my quarters on the naval hospital reservation when I heard the [illegible] of planes pass[illegible] [illegible]. This [illegible] immediately f[illegible] sion. I didn't because the naval hospital was located alongside the Army Hickam Air Field and across the channel from the Naval Air Station on Ford Island. We had planes flying about us a great part of the time. Dynamite was being used in connection with construction work in the rear of the hospital. The explosion of 300 to 500 pounds of dynamite sounds quite similar to that of an air bomb. Then I heard more planes and more explosions. That wasn't quite normal, and I started for the window to see what was going on. Just then my young son, Billy, thirteen years old, dashed into the room and shouted, ''They're Jap planes!'' I asked, ''Jap planes?'' He replied, ''Yes, look at them,'' and pointed out the window. I looked out the window and Three of them went by the second floor of my quarters and about 75 feet away. They were so close that the features of the aviators could be easily distinguished. The planes approached from the sea, flying low and hiding behind the hospital buildings so that they would not readily be seen. They did not attack the hospital but hedgehopped over it en route to military objectives.

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* Presented at the Fourth International Assembly of the International College of Surgeons, New York, June, 1943.

I told my family to stay in the house and immediately went to the hospital where the officer-of-the-day was already getting all hands to their stations, distributing additional supplies to operating and dressing rooms, and scattering ambulances and fire fighting apparatus about the hospital grounds so that they would not, perhaps, all be destroyed at once. A considerable number of our ambulant patients were rapidly transferred from the wards to hospital tents in the rear of the hospital so that their beds would be immediately available for casualties. Quite a number of patients who were practically well or awaiting return of their ships to Pearl Harbor requested immediate discharge to duty so that they could join some unit and fight.

About ten minutes after the raid commenced, a Jap plane ablaze was seen gliding down towards the center of the hospital. It looked as though it might make a direct hit on the middle of the main hospital building, but very fortunately veered off a bit, carried away a corner of the roof of the laboratory and about half of our animal house, and crashed on the tennis courts alongside the hospital. It came to a stop beside a frame house, which immediately caught fire. Both fires were promptly extinguished by the hospital force. The Japanese aviator had been killed by a shot in the head before the plane crashed, so that it evidently came down entirely out of control. We considered ourselves very lucky.

Throughout the day of the raid came disturbing reports over house radio sets that the water had been poisoned, that many Jap transports convoyed by war ships were landing troops here and there on the coast, etc. It was at first stated that our Army and Marines were keeping off these landing parties. About the middle of the day, it was reported in detail that large numbers of Japanese troops had landed on the north coast and were pushing back our troops. We were too busy to worry about such reports, but though I actually knew nothing about it, I tried to keep them from our people and said they were incorrect. The poisoned water rumor was most persistent and quite alarming to many, but was finally disproved by water analyses. These reports were spread by shortwave radio sending apparatus manned by Japanese fifth columnists in scattered houses, stores and cane fields. They were gradually located during the day and all the Japs handling them shot.

About an hour after the raid started, we moved the hospital families from their quarters into the basement of the hospital, where they were pretty well protected by reinforced concrete. They slept there until they were evacuated to the mainland on Christmas Day. I have frequently complimented these women and children upon their behavior. They were naturally frightened, but were quiet and absolutely no worry to the rest of us—except for their presence. Under the circumstances, we would have preferred them to be in San Francisco. It was, of course, impossible for us to have any real Christmas celebration, but on Christmas Eve, our Red Cross Field Director got a small tree and trimmed it with some tinsel and ornaments. One of the doctors dressed himself up as Santa Claus and handed out some little present to each member of the families. While the occasion lacked the joyous frivolity to which we had all been accustomed at Christmastime, it was really very impressive and enjoyable. It made for happiness and temporary forgetfulness of the next day when they were all to be evacuated, knowing that they would have to run the gauntlet of Jap submarines between Honolulu and San Francisco.

We received our first casualty shortly after the raid commenced. It was a man who had been walking with his wife and baby down the road alongside the hospital. A shell fragment had carried away his left arm and part of the shoulder. He died soon after admission to the hospital.

About a half hour after the raid began, casualties started to pour in. We received them at an average of three a minute for the next three hours. They were brought to the hospital in all sorts of vehicles: ambulances, military and civilian trucks, private cars, delivery wagons. They were brought in by all classes of civilians. It was most inspiring to see the way they cooperated in bringing casualties to the hospital under fire, with no thought of possible injury to themselves or to their cars.

The immediate handling of such a flood of patients was quite a problem, but successfully solved by distributing them to all wards (12) and the main operating suite as they arrived. The hospital was in the unusual position of being both a main dressing station and a hospital. A receiving ward would have created a hopeless bottleneck. This distribution of patients was directed by the Commanding Officer and the Executive Officer. All other doctors on the hospital staff (33) were working in the various wards with four operating teams in the operating suite.

The badly wounded, those demanding immediate surgical attention, were sent directly to the operating amphitheatre as rapidly as possible. While an effort was made to allocate other patients to wards in accordance with their types of injuries, each ward actually received many varieties of casualties. As a result, it was necessary to re-group the patients during the next two days by transfers from one ward to another in order to group similar classes of casualties together in the same ward or wards. Approximately 47 per cent of all casualties admitted were burn cases.

Upon admission, all patients not known to have been previously morphinized were given ½ gr. morphine sulphate hypodermically followed by tetanus antitoxin, 1500 units, alone or combined with anti-gas serum. All service personnel have now been given tetanus toxoid and are immunized against tetanus. At the outbreak of war, however, many had not yet received the toxoid. Tetanus antitoxin was therefore administered. With casualties arriving so rapidly, it was necessary to assign a group of doctors and nurses to the morphinization of patients. The usual technic of administering hypodermic medication was, of course, totally inadequate for this occasion. A solution of morphine pedoes. A quite noticeable and very unusual feature of these burns was that those parts of the body surface which were covered by clothing of any kind were not burned. When the attack occurred, many men on board ship were below decks and in various stages of undress. They dashed to their stations without waiting to dress. Some had on trousers and no shirt; some were in their underclothes; some only had on a pair of trunks. Those wearing undershirt and trousers were burned only on the arms and face. Those with trousers but no shirts were burned over the entire body above the waist. Those wearing only trunks were burned over the entire body cept about the hips. Those fully thed were burned only about the nds and face.

Burned areas covered as much as 80 per cent of the body surface. They were combined second and third degree burns. All were given local treatment, some type of tanning process, as rapidly as possible. The following applications were used: tannic acid spray, 5 to 10 per cent; 2 per cent aqueous gentian violet spray; triple dye spray; 10 per cent tannic acid spray followed by silver nitrate 10 per cent; tannic acid jelly; sulfanilamide in mineral oil 0.8 grm. to 100 c.c. Bland ointments were used on hands and face.

Because of the great number of burn cases, it was necessary to use anything that was available which would spray the solution. Ordinary flit guns were emptied, refilled with the medicated spray, and used to spray patients.

A large majority of the patients were covered with fuel oil, but no attempt at removal of the oil or débridement was made until the first or second day after admission. Local treatment was, therefore, necessarily applied over the oil. Nevertheless, reasonably efficient tanning resulted. Inability to secure early and efficient cleansing of the burned area is the main difference between war burns and burns encountered in civil practice. During an engagement, nothing more than advanced first aid is possible.

As soon as the necessary cradles could be obtained, each severely burned patient was placed under a heat cradle, several blue electric lights being used to supply the heat and the cradles covered with blankets. Blue lights were used because wards had not been previously blacked out and total blackout was imperative.

This work continued throughout the day and night for about ten days, doctors, nurses and corpsmen working in relays. At night, the only light available in the wards was the faint blue light given by flashlights equipped with blued glass. This naturally seriously slowed up work, especially intravenous medication.

By the third day, reorganization of patients was accomplished, so that each ward contained similar cases. Teams of corpsmen were organized and rapidly trained in cleansing and débridement of wounds, in the technic of minor dressings and forcing of oral fluids. A number of convalescent patients, seamen, electricians, machinists, etc., who were in the hospital before the air raid joined in this work and did exceedingly well. This is a very good example of what the lay worker, such as nurse's aid, can do on such occasions.

Great difficulty, however, continued to be experienced in removing the fuel oil from patients, as no suitable detergent could be found. It was later discovered that the removal of fuel oil could be expedited by the use of a gauze or cotton sponge saturated with mineral oil. This readily removes the thick black oil, but also leaves a thinner oily film which may require removal. This latter step is more easily performed.

By the third day also, considerable

quantities of human wet plasma had become available to replace the exhausted supply of dried plasma which had been on hand prior to the raid. Wet plasma was presented from the blood bank at Queen's Hospital, Honolulu. Hundreds of citizens volunteered to give blood for this purpose. The wet plasma was invaluable as it filled in the interval between the exhaustion of the dried plasma which had been on hand before the raid and the arrival of additional dried plasma from the mainland.

As more plasma became available, about two-thirds of the medical personnel, assisted by rapidly and specially trained corpsmen, commenced giving plasma in the great majority of burn cases. At this stage, tanning treatment failed in severe cases. There had been such a great loss of fluid through the skin that the eschar had become maccerated and in many areas completely rubbed off. In some cases, the loss of fluid was so great that the patient would be found lying in a regular pool of his own fluid.

As the eschar was removed, different forms of local treatment were tried, such as gentian violet spray, sulfanilamide in mineral oil, wet dressings and open exposure under a heat cradle. There was no apparent difference in the results, but it was found that almost any kind of dressing that was allowed to dry on the burns defeated its purpose, as it became foul in twenty-four hours and required removal. This removal, besides causing considerable pain, would leave raw, bleeding and infected surfaces.

It is well to note here the difficulty of giving intravenous therapy to badly burned patients. The cubital veins could not be seen or felt in many instances because of the great amount of edema, but in spite of the apparent impossibility of finding these veins, we did find them and for many days gave therapy in this way. In only a few cases was it necessary to cut down on the veins and in some that were cut down on, the patients were in such poor condition that the solution would not flow. The femoral vein was the only one we were always certain of finding, because everybody wore at least a pair of trunks and this area was not burned. With such continuous intravenous therapy over a considerable period of time, conservation of all available veins was most important. As their blood pressure improved, the veins of the feet and ankles became more prominent and were also used.

Oral chemotherapy was used quite extensively after the first two or three days to combat infection. After the fourth or fifth day, sulfanilamide dusting powder was also used on the raw, infected surfaces and kept moist with dressings wet with saline or azochloramid solution. This appeared to do as well, if not better, than anything else available.

During the first week following the emergency, our laboratory was practically out of commission as the technicians had been assigned duty in attendance on the very sick. When it became available, we obtained reports on kidney function, red blood cell counts and serum protein estimations. It was found that although practically all the serious cases showed albumin in their urine, there were comparatively few that showed evidence of any great kidney damage. Approximately three cases passed bloody urine for several days.

Chemotherapy was used quite extensively after the first two or three days. Some patients developed a temperature which was considered to be due to local infection. These were given 1 gm. of sulfanilamide every four hours until the temperature had been normal for seve days. This form of treatment seemed to be most beneficial. After the fourth or fifth day, sulfanilamide dusting powder was also used on the raw, infected surfaces and kept moist with wet saline dressings. This appeared to do as well, if not better, than anything else available.

After ten days of intravenous therapy some patients showed a marked secondary anemia. These were given 500 c.c. of whole citrated blood. In a few cases these transfusions had to be repeated several times.

After the first week fairly heavy doses of vitamin "C" and thiamin chloride were given. This was continued until the patient was dismissed. As soon as the tient could eat, a high vitamin, high otein diet was prescribed.

Before giving our statistical report, it is well to point out that while the treatment that has been described may be criticized, we think that, under the circumstances, the rapidity of the admissions, the unheard of numbers of severely burned cases being admitted to one hospital in such a short period of time and consequent lack of sufficient plasma, the results would compare favorably with any other type or types of treatment for which thorough preparation had been made, for any type of elaborate ideal treatment would have to be abandoned under such circumstances.

STATISTICAL REPORT

The percentage of deaths to total admissions	27.5%
Corrected for those that died in first 12 hours	16.7%
Corrected for those that died in first 36 hours	12.5%

Before the raid, both the Army and Navy thought that they had sufficient dried plasma on hand. I had 500 units. But we had no conception of the enormous number of severely burned cases we would be called upon to treat nor the tremendous amount of plasma that would be required. In estimating the amount of plasma that should be immediately available at a hospital in an area exposed to enemy air raids, estimate the amount you think necessary, add what you consider an adequate reserve, and multiply that by three; then you will have about what you really need.

Some time after the air raid, we received a small amount of the recently developed solution for local treatment of burns—triethyldiazine or 2½ per cent solution of sulfadiazine in 8 per cent triethanolamine. It is applied as a spray. This had been widely heralded, but was not immediately available to us locally. A great opportunity for comparative study was missed, but the future may offer it again. We did, however, later use it in two burn cases, and our observations are given for your information.

These cases had only 5 to 10 per cent of the body surface burned and that only to a first and second degree. The results obtained were very satisfactory. After a preliminary careful cleansing and débridement of the burned areas, the sulfadiazine solution was sprayed on every hour for two days, and thereafter every two or three hours as necessary. After the first two days, a nice semi-translucent film was formed over the burned surface. This film remained on until the burned surface was healed. There were only one or two small areas that showed any evidence of infection, and by cutting a window at this site and spraying hourly for a day or two, the infection was controlled.

In our opinion, this is an excellent treatment for burns, but the extreme care and time necessary for cleansing, débridement, and application of the treatment before the film is formed over the burned area will probably prevent considerable use of this treatment on patients with extensive burned surfaces.

There have been several formulas given to be followed in the administration of plasma. These are based on the hematocrit reading and the plasma protein level. One of the doctors at Honolulu said after December 7, 1941, that if he had a big plasma bank and a good bookkeeper, he could follow these formulas. During or just after an air raid attack or in the field and on board a ship in action, however, one either cannot obtain or must distrust these readings. I would like to say that I have not yet seen a report in medical literature of death attributable to an overdose of plasma.

At midnight on December 7, we had 960 patients in a hospital whose official rating was 506 patients. The next day we received almost a hundred more who had been temporarily cared for at outlying stations.

BLAST INJURY OR CONCUSSION OF THE LUNGS

We received 19 cases of blast injury or concussion of the lungs. These cases, while not very numerous, were extremely interesting. Twelve were mild cases, the patients returning to duty in from five to seven days. Three were moderately severe, but the patients were returned to duty in from seven to ten days. Four cases were severe.

All of these patients exhibited varying degrees of severity and differing combinations of the following symptoms: shock; restlessness; labored breathing with diminished air intake; cough; cyanosis; and blood streaked or frothy sputum. All had been in the vicinity of high explosive blasts and, in addition, many had inhaled dense oil smoke for considerable periods. Because of this fact, these cases were at first believed to be smoke inhalations but later, because of the symptoms and clinical course, considered with the situational etiologic agent (blast from high explosive), were diagnosed as blast injuries to the lungs, as described by various military observers in England and Europe. The four severely ill patients had a clinical course not unlike lipoid pneumonia.

The outstanding lesion of this condition is pulmonary hemorrhage resulting from the impact on the body wall of the positive pressure wave created by the detonation of high explosives. This wave has a velocity of about 90 miles a minute. There is rupture of the pulmonary capillaries and alveolar walls and the air sacs are filled with red blood cells. There may also be subarachnoid hemorrhage.

That this condition may cause almost immediate death is shown by the fact that some twenty casualties found to be dead upon arrival at the hospital had no external evidence of injury other than a bloody froth about the lips. Six others who died within a few hours after
mission had no external evide
lence. No autopsies could be
in these cases because of the
sure of work in caring for the

Early recognition of this
should be emphasized because
tients are at first not likely to l
sidered seriously ill and because o
value of early rest and oxygen ther
Several of our patients would have di
without oxygen.

Treatment of these cases was chiefl symptomatic, viz.: morphine sulphat and codeine for restlessness and cough; oxygen for respiratory difficulty and cyanosis; forced fluids; strict bed rest.

COLLATERAL ACTIVITIES

A very important part of our staff was the Chinese galley force. Midday on December 7, they worked until 3:00 P.M., cooking and serving dinner to 4500 persons. They then immediately started getting supper ready. Not only the hospital staff but all defense personnel in the vicinity of the hospital were fed by us.

A renewal of the Jap attack that afternoon or night had to be anticipated, and it was imperative that our defenses not be weakened by men going any great distance for meals.

An extremely important part of our work on December 7, and for several days afterwards, was identification of the dead. The hospital acted as a clearing house in this respect, all bodies being brought there for identification prior to burial. We prepared lists of the dead, and the detail having this duty worked twenty-four hours a day for several days in order that the lists might be sent [illegible] the Navy Department as soon as [illegible]le.

[illegible] losing, I would like to say a word [illegible] my hospital staff at Pearl Harbor [illegible] the time of the raid. I was proud of them all and especially of my nurses and hospital corpsmen, many of whom were youngsters who had been in the service a comparatively short time. They stood their baptism of fire well. When the Jap planes roared over and around us, they dashed from their quarters to the main hospital building through a shower of anti-aircraft shell fragments and stray machine gun bullets. Their first thought was to care for their patients and to get ready for those we knew would soon be coming. Though occasional shell fragments and machine gun bullets zipped through our temporary ward buildings, all were so busy that they had no time to think of themselves, and fortunately nobody was injured. After the raid, all hands worked until they dropped, the nurses especially. I will always remember my chief nurse, a frail appearing little woman who looked as though a good gust of wind would blow her away. But she was made of steel wire. She was everywhere, encouraging, supervising, directing. Three days after the raid, it was necessary to order her to go to bed and get some sleep.

The hospital staff took great pride in the fact that, though under-staffed for such a great number of serious casualties, we had anticipated our needs and were able to care for our own in this emergency without any outside medical assistance except some volunteer trained nurses from Honolulu.

I am sure that you will be glad to know that the Naval Hospital, Pearl Harbor, was given the unusual distinction of being cited by the Commander-in-Chief, United States Pacific Fleet, for distinguished services during and subsequent to the Japanese attack on December 7, 1941.

"The opinions or assertions contained in this article are the private ones of the writer and are not to be construed as official or reflecting the views of the Navy Department or the naval service at large."

SUMARIO

Se ha presentado una descripción gráfica de las experiencias del hospital naval de Pearl-Harbor durante y después del ataque aereo de los japoneses en el día memorable de diciembre 7 de 1941. La necesidad de tratar numerosos casos de shock, de traumatismos agudos de quemaduras, y de heridas explosivas de 960 víctimas de dicho ataque, en un hospital de 500 camas solamente, reveló la importancia de tener siempre a mano suficientes cantidades de plasma sanguineo, así como el valor terapéutico de las sulfonamidas en reducir las infecciones.

RÉSUMÉ

L'auteur décrit son expérience à l'hôpital naval de Pearl Harbor après le raid japonais du 7 décembre, 1941. La nécessité de traiter le choc, les cas urgents chirurgicaux, les brûlures et les blessures dues aux éclats de bombes de 960 blessés dans un hôpital de 500 lits présenta de nombreux problèmes. Les incidents de cette soirée mémorable nous démontrèrent forcément l'urgence

d'avoir toujours en stock une quantité adéquate de plasma sanguin et la grande valeur thérapeutique des sulfonamides dans le traitement des infections.

Выводы

Автор описывает работу в Морском Госпитале в Перль Гарбор 7-го Декабря, 1941 года, после коварной аттаки Японцами. Лечение шока, экстренныя операции, обжоги и "бласт" повреждения в общем каких нибудь 960 ранненых при только 500 сот коек ясно указали на необходимость держать адектванный запас плазмы и ценность сульфонамидов.

Ventajas de una Pronta Intervención en las Afecciones Otomastoideas*

(Advantages of Early Intervention in Otomastoid Infections)

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SUMMARY

The author presents several clinical histories, confirming the advantages of early intervention in otomastoid processes, and concludes as follows:

(1) Myringotomy assists the evolution of a suppurative otitis media; (2) rhino-pharyngic elements suspected from the etiologic viewpoint of an otitis must be eliminated surgically as a causative factor; (3) mastoiditis is concomitant with suppurative otitis media; (4) osteitis of the mastoid has no other treatment than surgery, and there is no justification for deferring it; (5) non-intervention always implies the loss of audition, and quite often the loss of life; (6) trepanation of the mastoid, if performed under local anesthesia and correct technic, has no contra-indications and preserves the auditory function; (7) suppuration of the ear, lasting more than five weeks without improvement, calls for antrotomy, and (8) suppurations in a period of chronicity, exacerbations and complications of an old osteitis of the mastoid are practically always due to not having been operated on in time. They call for a petromastoid emptying—a dangerous operation, mutilating some tympanic elements and with certainty involving the loss of audition.

ES innecesario aclarar que cuando se habla de afecciones otomastoide [illegible] referi [illegible] olar a las otitis [illegible] upur sión del proceso supurativo a antro y células mastoideas, ya que en otras enfermedades del oído no participa el elemento neumatizado de mastoides.

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*Presented at the Third International Assembly of the International College of Surgeons held in Mexico City, August, 1941.

La mastoides considerada fisiológicamente, apenas cumple el limitado papel de ampliar el reservorio del aire contenido en la caja timpánica la cual como parte esencial del oído medio tiene a su cargo la importante función de la transmisión y acomodación de los sonidos.

Pero si es tan escasa la colaboración fisiológica de la mastoides con la caja, es en cambio de gran trascendencia su participación en los procesos supurados de oído medio, tanto por la alteración que pueden ocasionar en la audición, como por el peligro que estas supuraciones entrañan, incluso para la vida del enfermo.

Anatómicamente, el antro y las células mastoideas, no son más que un divertículo de la caja del tímpano, o más propiamente, parte de una cavidad que comenzando en el orificio faringeo de la trompa de Eustaquio, termina en la célula de la punta mastoidea, con una expansión central y la más importante que es la caja.

El extremo terminal mastoideo, se encuentra a más bajo nivel que todo el resto de la cavidad, y los espacios mastoideos están constituídos, por grupos celulares de diversos tamaños que comunican entre sí por estrechos canales que pueden obstruirse facilmente.

La mucosa que reviste el antro y células mastoideas, es una continuación de la trompa y caja timpánica.

Este esquema anatómico, nos es suficiente para explicarnos la marcha y evolución de las supuraciones otomastoideas. Las relaciones inmediatas de estas cavidades, con órganos como nervio—facial, cerebro, cerebelo, meninges, seno lateral, carótida yugular y oído interno, han de tenernos en constante alarma, por la gravedad que supone la permanencia del pus en el centro pudieramos decir de una zona que por cualquier punto que sea desbordada, se traducirá en gravísimas complicaciones.

La iniciación de la infección si bien puede en raros casos partir de oído externo (traumatismos, maniobras intemperativas, forúnculos etc.), lo corriente es que sea de origen rinofaringeo, llegando a través de trompa a oído medio pus o gérmenes piógenos para constituir un absceso purulento cerrado en caja y sus divertículos mastoideos ya que la inflamación de la mucosa de trompa imposibilita el drenaje por esta vía.

Como prueba de la participación de mastoides, desde el primer momento tenemos que la otalgía violenta, que acusa el enfermo, antes de exteriorizarse el absceso, va acompañada de dolor en mastoides, más manifiesto sobre todo si se explora presionado en región de antro y de punta mastoidea. Existe pues desde el principio un proceso inflamatorio en mastoides que pasará a purulento y ocasionará o no una osteitis según su evolución ulterior. Por mucho tiempo no se hablaba de mastoiditis hasta que la lesión ósea tenía lugar, pero este concepto es erroneo y hoy todo el mundo admite el de Mayer y Newman que afirman que la mastoiditis comienza al mismo tiempo que la otitis.

Constituído ya el absceso, su evolución ha de esta influenciada por diversas circunstancias; edad, virulencia del germen, defensas del enfermo y sobre todo por un pronto y adecuado tratamiento.

El pus retenido a presión, en cavidad cerrada, tiende naturalmente a buscar salida por el sito, de menor resistencia y el cirujano está en el deber, de una vez diagnosticada la colección purulenta, dar salida al pus por el punto más declive o por el que sea más asequible quirúrgicamente. Todo retraso en vaciar el pus es lesivo para el enfermo y más cuanto como en estos casos de no vaciarse puede derivar a regiones donde establecida la infección puede traducirse en afecciones siempre gravísimas y no raramente mortales, (meningitis, abscesos cerebrales, y cerebelosos, laberintisis, trombosis y trombofletitis yugular etc.).

Es muy de tener en cuenta con relación a la edad que en el infante subsiste en la pared superior de la caja la sutura petro-escamosa sin cerrar y a través de ella pasan tractos conjuntivos y vasos de la dura madre a la mucosa, circunstancia que favorece la propagación a meninges. En el adulto se cierra la sutura aunque a veces subsisten los vasos y hay casos como ha señalado Hyrtl de dehiscencia espontaneo del techo timpánico e igualmente del suelo sobre golfo de la vena yugular lo que hace que ésta se prolapse en fondo de caja y aunque este se halle a nivel más bajo que la pared inferior de conducto puede rebasar este nivel, circunstancia que debe recordarse siempre al hacer una miringotomía por el peligro que supondría herir vaso tan importante. Afortunadamente no es frecuente esta anomalía y clinicamente se descubre traducida en el síntoma que se llama tímpano azul.

Normalmente el pus se abre camino rompiendo la membrana del tímpano y éste es el sitio que escoje el cirujano como más asequible para por medio de la punción abrir el absceso y que vacie por conducto auditivo externo.

Una vez que el pus sale al exterior lo que fué un absceso otomastoideo pasa a ser una otitis media supurada, aguda, o mejor como dice Grümberg, otitis media supurada en período agudo ya que no se debe hablar previamente de formas agudas o crónicas, pues es difícil apreciar su evolución sujeta a varias circunstancias; sólo exceptúa el caso de la otitís Tuberculosa que considera crónica desde su iniciación.

Ante una supuración otomastoidea es elemental dirigir nuestra atención en buscar la causa la que
mayoría de los casos re
ringe y nos dispondremo
posible a eliminar o de
focos que originan la inf
tienen; sinusitis, amigda
cornetas, etc., por medio
ciones que requiera cada

Una vez causada esta
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el tratamiento lo que ocasionó la complicación que siempre la creen más grave si no se les anuncia previamente que podía surgir.

Supuesto que ya hemos llenado las indicaciones de punción pronta de membrana timpánica (no hay que desconocer que cuanto más tiempo está el pus a presión en las cavidades, mayores son las lesiones en el revestimiento muco perióstico y más fácil que interesen el hueso que de dicho revestimiento se sirve para su nutrición) por esto debe no retrasarse la miringotomía; supuesto que también hemos practicado las intervenciones rinofaringeas para eliminar la causa de la infección y ya tenemos la confianza del enfermo y con un trataiento instituído hemos de continuar ando la marcha de la enfermedad cojiendo y valorizando aislados y en conjunto aquellos síntomas a veces inapreciables para el enfermo y a los que nosotros no podemos despreciar.

Dolor. El dolor violento, pulsátil que acusa el enfermo antes de la perforación, cede y desaparece cuando la supuración se establece con un drenaje perfecto. Debe también desaparecer el dolor de mastoides pero si este aunque muy atenuado persiste y se exacerba a la presión o reaparece después de períodos de calma, hay que pensar en lesión ósea aunque la fiebre no exista y la supuración esté disminuída. Una radiografía es seguro que nos confirma la osteitis y ya es inútil y peligroso el demorar la intervención.

Supuración. La supuración auricular, anguinolenta al principio, purulente espesa y abundante después; comienza a disminuir y se hace mucosa y desaparece totalmente si la evolución es favorable en tres o cuatro semanas. Pero si persiste aunque muy disminuída, reapareciendo por descargas acompañadas de reacción dolorosa en mastoides o de ligeras elevaciones de temperatura: si cesa bruscamente agudizandose los otros síntomas y malestar general, hay que pensar en la obstrucción de aditus o de los canales de las células mastoideas que favorecen la lesión ósea y que es seguro que la radiografía y la formula leucositaria nos confirmarán. Cuando el pus persiste más allá de la cuarta o quinta semana, espeso, fétido y francamente purulento, aunque no se acompañe de otros síntomas, hay que explorar radiograficamente con toda atención y es seguro que hallaremos lesiones óseas que aunque de momento no acusan más manifestaciones, debemos intervenir quirúrgicamente pues aún salvaremos la audición y evitaremos complicaciones que en no se sabe que momentos nos habían de sorprender.

Temperatura. La temperatura que antes de la perforación era elevada, desciende unas veces bruscamente, otras en lisis quedando normal a los pocos días de establecida la supuración, pero si persiste aunque muy poco elevada o reaparece a intervalos, hay que investigar cuidadosamente otros síntomas que seguramente hallaremos, denunciadores de que se está fraguando la lesión ósea.

Examen Otoscopio. En una otitis supurada, debemos practicar frecuentemente previa limpieza del pus, el exámen del tímpano que nos dará detalles de gran valor sobre la posible evolución de la enfermedad pues un tímpano que persiste rojo, inflamado, edematosos los bordes de la perforación, por donde se vé salir el pus con dificultad y que aún repitiendo las parentisis no disminuye el abombamiento, es revelador de una retención o de una gran abundancia de pus debido a una osteitis de mastoides que pronto confirmaremos por otros síntomas.

Tenemos que extremar nuestra vigilancia en aquellos enfermos que sin presentar con claridad ningún síntoma sin embargo y aún no relacionándolo con la otitis y apenas prestándole importancia nos hablan de insomnios, ligeras cefaleas, destemplanzas, cansancio, pues son quizá las más justificables de una pronto intervención si no queremos vernos sorprendidos y acaso tarde con una grave complicación.

Hasta aquí hablamos de síntomas poco ostensibles y que pudiéramos llamar de iniciación de una osteitis mastoidea y que el otólogo debe descubrir y aprovechar (se pena de correr un grave riesgo) para intervenir sin esperar a lo que se ha considerado y aún describen los libros como patognomónicos de la osteitis mastoidea, que es el despegamiento de la pared postero superior del conducto; o al empastamiento con fluctuación o fistulización en región mastoidea, o el escalofrío con sus remisiones y elevaciones bruscas de temperatura, o a la paralisis facial, o las cefaleas intensas y continuas, vómitos, vertigos; síntomas estos que ya no nos señalan sólo que hay una mastoiditis, sino una grave complicación de una mastoiditis que hubo desde hace un tiempo y que no supimos descubrir y operar en condiciones más favorables.

El diagnóstico precoz es la suprema aspiración ya que cuanto más pronto se puede instituir un tratamiento más garantías de éxito tenemos.

Nuestra conducta es distinta ante una empiema de mastoides susceptible de reabsorberse y curar siguiendo la evolución normal en una otitis que ante una supuración en la que participa el elemento óseo de mastoides, una vez confirmada esta osteitis nada hay que justifique la demora del único tratamiento eficaz que es la antronomía todo lo extensa que indican las lesiones que encontremos.

Hay que oponer al antiguo concepto que aconsejaba esperar una semana y que sustentaban prestigios como Lermoyez, el moderno de intervenir lo más pronto posible para poder decir con el maestro de la escuela de Bordeaux-Moure "Jamás me he arrepentido de abrir una mastoides demasiado pronto—algunas veces he lamentado abrirla demasiado tarde."

El intentar curar una osteitis masoidea médicamente es un sueño irrealizable aún en estos tiempos de las sulfanilamidas. Conozco varios fracasos y yo mismo en dos de los enfermos por mí operados recientemente intenté el tratamiento sulfamínico sin el menor resultado. Reulins llama la atención sobre el abuso del sulfamidyl en las otitis medias el cual dice oculta o retarda los síntomas de las mastoiditis aumentando las complicaciones.

Lo mismo podemos decir de las vacunas, diatérmia, radioterapia lavados, etc., que se alivian y a veces hasta dan sensación de una curación, esta es aparente pero el enfermo se siente confiado y rehuye la intervención precoz con lo cual se condena por lo menos a la pérdida de la audición. Todos los especialistas tenemos tristes recuerdos de enfermos que no quisieron ser operados al sentirse aliviados por otros tratamientos, para recurrir después a nosotros con serias complicaciones. Sobre mí pesan dos casos que por las circunstancias que los rodearon aún me llenan de amargura. Uno un chico de 19 años familiar mío y a quien profesaba gran afecto. Tubo una otitis consecutiva a una rimitis catarral, a pesar de todos los cuidados persistía la supuración y acusaba un ligero dolor a la presión en la punta de mastoides, le propuse que se dejase trepanar y lo creyó una exageración por mi afecto hacia él; como insistiera en mi propósito, ya muy seriamente, me prometió que al regreso de un viaje que tenía que hacer le operaría, en efecto emprendió el viaje y unos días después a consecuencia de un gran enfriamiento se agudizó su estado y con tal graved que tuvo que ser [illegible] e [illegible] n M por uno de mis maestros; el Dr. Hinojar de una mastoiditis con tromboflebitis del seño lateral falleciendo a los dos días de una septicemia.

El otro era hermano de un compañero Inspector Provisional de Sanidad; tenía una otorrea persistente de más de un año de duración sin acusar ningún otro síntoma; con motivo de un absceso periamigdalino le ví en compañía de su hermano; después de un determinado interrogatorio me reveló que no prestaba ninguna atención a su otorrea, su hermano le hizo una radiografía que acusaba lesiones óseas de mastoides, le propusimos la intervención que rechazó de plano y marchó a su pueblo una vez curado de su absceso periamigdalino, y al muy poco tiempo llamó a su hermano que fuese a verle pues se encontraba nfermo con fuertes dolores de cabeza fiebre, el hermano aterrorizado diagnosticó una miningitis otogena y le intervenimos haciendo un vaciamiento petromastoideso, se le hicieron varias punciones con inyecciones de suero antimeningocóccio y a los pocos días falleció.

Estos dos casos no tienen nada de extraordinario y la literatura médica está llena de ejemplos parecidos, todos ellos reveladores de que siempre será poco nuestro celo en descubrir a tiempo una osteitis de mastoides y no demorar su intervención acometiendo la operación con la seguridad y la alegría de que cumplimos un grato deber.

Mucho queda por decir de las diversas formas clínicas de las otomastoiditis, su etiología y sintomatología pero no es ese el objeto de esa comunicación modesta y en la que como su título anuncia sólo me propongo hacer resaltar las ventajas de operar pronto y aportar mi menudo grano de arena poniéndo en alerta a los médicos y enfermos que ante una supuración de oídos no sentimos la preocupación que justamente debemos prestarle.

SUMARIO

(1) La miringotomía favorece la evolución de una otitis media supurada; (2) elementos rinofaringeos sospechosos desde el punto de vista etiológico de una otitis, deben de ser eliminados quirúrgicamente como tratamiento causal; (3) la mastoiditis es concomitante con la otitis media supurada; (4) la osteitis de mastoides no tiene otro tratamiento que el quirúrgico y no hay justificación para aplazarlo; (5) la no intervención supone siempre la pérdida de la audición y muchas veces la de la vida; (6) la trepanación de mastoides practicada con anestesia local y técnica correcta no tiene contraidicaciones y salva íntegramente la función auditiva; (7) la sola supuración de un oído que se prolonga más de 5 semanas sin tendencia a mejorar, exige una antrotomía, y (8) las supuraciones en período de cronicidad y las agudizaciones y las complicaciones de una osteitis antigua de mastoides son casí siempre debidas a no haber operado a tiempo y exigen ya un veciamiento petromastoideo, operación peligrosa y mutilante de elementos de caja que implican seguro la pérdida de audición.

RÉSUMÉ

(1) La myringotomie favorise l'évolution d'une otite moyenne suppurée; (2) des éléments rhinopharyngiens soupçonnables du point de vue étiologique d'une otite doivent être éliminés chirurgiquement comme traitement causal; (3) la mastoïdite est concomitante de l'otite moyenne suppurée; (4) l'ostéite de la mastoïde n'a pas d'autre traitement que le chirurgical, et il n'y a pas de justification pour le différer; (5) la non intervention entraîne toujours la perte de l'audition et maintes fois celle de la vie; (6) la trépanation de mastoïde, pratiquée avec anesthésie locale et une technique correcte, n'a pas de contre-indications et sauve entièrement la fonction auditive; (7) la simple suppuration

d'une oreille qui se prolonge plus de cinq semaines sans tendance à l'amélioration exige une antrotomie; (8) les suppurations devenues chroniques et les exacerbations et complications d'une ostéte ancienne de mastoïde sont presque toujours dues à ce que l'on n'a pas opéré à temps, et déjà elles exigent un videment pétromastoïdien, opération dangéreuse mutilant des éléments de caisse et entraînant à coup sûr la perte de l'audition.

Gas Gangrene*

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GAS gangrene results from infection by anaerobic, gas-producing organisms of lacerated tissues, especially muscle. On the other hand, it must be realized that many war wounds become infected with gas-producing organisms, and still more can be proved bacteriologically to contain anaerobes, without clinical evidence of gas gangrene in the wounded tissues.

Etiology. In order of frequency the micro-organisms usually responsible are Cl. welchii, Cl. septique and Cl. edematiens. Usually more than one species are present in the same wound. When there is only one it is likely to be the Cl. welchii.

The causative organisms fall into two groups: those which break down starch, and those which digest proteins. Cl. welchii is the most important member of the saccharolytic group; it is gram-positive, anaerobic, and possesses a definite capsule. The proteolytic group includes Cl. septique, which splits protein into ammonia and sulphuretted hydrogen.

It has long been known that gas gangrene is more prevalent during wet cold weather than in dry cold weather or dry warm weather; it was thought that contamination of the wound with mud, particularly of highly manured soil, was *the* factor in the production of these anaerobic infections.

So rife was gas gangrene in Flanders during the 1914-18 war and the 1939-40 fighting that the relation between highly manured soil and gas gangrene seemed established. Reasonable doubt has now been cast upon this hypothesis. There is no more heavily manured soil than that of the Yangtze delta, upon which Shanghai stands. Comparatively little gas gangrene was encountered in wounds inflicted on that soil. It would appear that it is the clothing worn by the victim, rather than the soil upon which he stood which is the major factor. This theory was evolved by the following reason:

All domestic animals harbor an

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organisms, but the sheep is the most important source of the infection, because its wool is used extensively for clothing. The seasonal incidence of gas gangrene is in keeping with this inception, for wool clothing tends to be used in the winter months. When cotton clothing is worn, such as was the case in the Mesopotamian campaign of 1915-18 and the Spanish War, there were but few cases of gas gangrene. Medical reports concerning the fighting in the Near and the Far East are in keeping with these observations.

In order to confirm the hypothesis, Maes took twelve pieces of woolen cloth, obtained from manufacturer's sample catalogues, and cut them in half. One half of each piece was dry-cleaned and steam-pressed; the other half was untreated. Similarly, cotton was obtained from a manufacturer's range of samples. Gas-forming organisms were recovered from eleven out of twelve woolen samples, whether they had been dry-cleaned or not. From the cotton samples such organisms were not obtained.

Substantiation that gas gangrene occurs from organisms harbored by clothing is afforded by Hindhaugh's report concerning six cases of infection which occurred in wounded sailors on board ship.

Underclothing must also be taken into consideration. For this reason wounds about the buttocks show a high incidence of gas gangrene, especially when occurring in those who have had little opportunity to bathe and change, so that contamination with fecal matter is likely.

Not all cases of gas gangrene are due to extensive wounds. We have seen a fatal case following the injection of insulin into the thigh of an elderly patient. Although the vastus externus muscle only was involved, fatal toxemia supervened. Adequate sterilization of syringes and needles is likely to be difficult when a medical unit is overwhelmed with casualties, but this possible source of infection should not be overlooked.

Predisposing factors. Penetrating (lodging) wounds, especially those caused by jagged fragments, show a higher incidence of gas gangrene than do other types of wound. The larger the amount of muscle damaged, the greater the liability. Particularly prone to gas infections are the muscular areas of the thigh and calf. The upper limb is much less frequently attacked. The scalp, face, thorax and the back are affected rarely, but the retroperitoneal cellular tissue is notorious as a site for virulent anaerobic infection when the colon or rectum has been wounded. When, for any reason, there is increased tension, e.g., a hematoma beneath strong fascia, the liability to gas gangrene is increased.

Decreased vascularity, e.g., injury to the blood vessels, or prolonged use of a tourniquet adds greatly to the risk of gas gangrene. General anemia from hemorrhage is also an important predisposing factor. Exhaustion, exposure, starvation and debility encourage infection by all types of organisms.

Clinical features. It is of cardinal importance to realize that the term gas gangrene is a clinical conception. This being so, it is perhaps well that the *gangrene* is in the forefront of the clinician's mind. Actually it is the *gas* infection of the wound he seeks to diagnose.

Nightingale recognizes four clinical types, and this differentiation should prove helpful because their treatment and prognosis are so different. The four types are:—

1. Acute fulminating gas gangrene 2. Gas gangrene of muscle	True gas gangrene
3. Gas abscess 4. Subcutaneous gas infection	Wounds with gas infection

In advanced cases the diagnosis is obvious. The affected area is tensely swollen and cool, and the khaki color of the skin in white races is easily recognized. Especially in the case of the lower limb, the foot and ankle are often bluish with large blebs upon the surface. There may be pyrexia, although this is not great and is often absent. Pain in the region of the wound (a prominent symptom in the early stages) ceases, often suddenly. The pulse rate continues to rise. The patient who was anxious and distressed says he feels better. Later still, vomiting commences and the malar flush gives place to a muddy pallor. Jaundice occasionally occurs, and is of grave significance, as it indicates that toxemia is sufficiently profound to damage the liver.

Even when patients are in the last stages of gas gangrene toxemia, the mental condition often remains surprisingly clear, as the following case testifies:—

Case 1. A man, aged 42, sustained a severe compound fracture of the left femur. Three days later the leg was grossly swollen, cold and tense, and the diagnosis of massive gas gangrene was obvious. The pulse rate was 160, temperature subnormal, and the patient presented a typical facies Hippocratica The brief examination interrupted him while he was engaged in completing a football pool competition, and within five minutes of the interruption he suddenly vomited and died.

Prodromal signs and symptoms. It is obvious that by the time acute fulminating gas gangrene is fully established, there is little to do except regret. It is equally certain that there is no short cut to early diagnosis. On the contrary, the diagnosis has often to be made by correlating diverse clinical findings.

Pain. There should be little pain in a wound after twenty-four hours. A continuance of, or an increase in, pain should put the clinician on his guard. Often the patient complains that the bandage or the plaster cast is too tight; this should be a signal to inspect the wound.

Vomiting. This may be the first symptom to arouse suspicion. As a rule, the more persistent the vomiting the more profound the toxemia, and continuous vomiting is of grave significance. It has been suggested that the toxins particularly affect the suprarenal glands, and that the vomiting is associated with the resulting lowered blood pressure.

A rising pulse rate, especially when combined with even slight discomfort under the plaster, should be a signal to inspect the wound.

Local appearance of the wound. In early cases there is unlikely to be much change in the color of the skin, although some edema in the neighborhood is usual. Pallor rather than redness is to be expected.

Crepitus. The discovery of crepitation is totally unreliable. Even its undoubted presence is misleading. Every war surgeon of experience has encountered cases where subcutaneous crepitus was present, and yet when the wound was explored, healthy bleeding muscle was revealed beneath. Crepitant subcutaneous tissue is not necessarily infected, so amputation flaps can often be fashioned with safety.

The discharge is usually plentiful, watery, and often slightly rust-colored. It is most unusual for it to be bloody, but it soon becomes malodorous.

The odor may prove helpful to a clinician with a well-developed sense of smell. It has been variously described as "musty" and "mousy"; in later cases as "rotten meat." As time goes on, there is no doubt about the offensiveness, which is due to the digestion of avascular muscle fibres by proteolytic organisms.

X-ray diagnosis. Many gunshot and bomb splinter wounds on radiographic examination show shadows which are due to imprisoned air or to hematoma formation; this is particularly the case when foreign bodies are retained. On the other hand, radiographs can prove helpful in confirming a doubtful diagnosis. A typical radiograph shows separation of muscle fibres by linear accumulations of gas.

Bacteriologic examination is of unquestioned value. When facilities exist, no time should be lost in availing oneself of the services of the bacteriologist. The finding of a specific organism is an indication for the employment of a specific antitoxin.

Operative diagnosis. Provided the patient is in even moderately good condition, this is an occasion where it is safer to "look and see than to wait and see." e appearance of muscle in the neigh- hood of the wound is a most reliable de. The changes in color are characteristic. When cut, anaerobic-infected muscle fails to contract or does not contract vigorously; furthermore, it does not bleed.

PROPHYLAXIS

Primary wound excision forms the best protective measure against gas gangrene. In the war of 1914-18 the incidence of gas gangrene in wounds received by British soldiers fell from 10 per cent in 1915 to 1 per cent in 1918. This improvement was due to increased facilities for primary excision of wounds (Blauvelt).

If the patient's condition permits, and a skilled surgeon is available, adequate excision of a wound within six hours would almost abolish this type of infection. Even up to eighteen hours few cases would occur provided excision of the wound, chemotherapy and antitoxin treatment were carried out.

Anti-gas gangrene serum is generally conceded to be valuable. It should be employed immediately, and not withheld until the appearance of odor of the wound arouses suspicions. For prophylactic use polyvalent serum is recommended—3000 international units of Cl. welchii antitoxin, 1500 of Cl. septique and 1000 of Cl. edematiens. Owing to the rarity of infection by the two latter organisms, many surgeons employ a dose of 7500 I.U. of Cl. welchii only. Prophylactic serum is administered intramuscularly—the resulting "reservoir" provides a longer period of protection than an intravenous injection.

Sulphonamide therapy. There is no evidence that these drugs are specific against gas-forming organisms, but there is every reason to employ them, both locally and generally; at any rate, they destroy some of the organisms, notably streptococci, which constitute a symbiosis.

TREATMENT

Conservative operation. Early operation founded on an understanding of surgical pathology, combined with energetic serotherapy and chemotherapy, are the sheet anchors. This is certainly an occasion which calls for débridement in the true meaning of the term, in that it is essential to provide free drainage and remove projectiles, clothing and other foreign matter. Nevertheless, this is not enough; *all infected muscle must be excised.* The first step is to enlarge the wound in such a way that there will be free drainage of even the deepest recesses. There is neither danger nor objection to large exploratory incisions, but as far as possible they should always be made parallel to the long axis of the limb; on the other hand, the deep fascia should be divided transversely. By this expedient, tension is relieved more adequately, and the tortuosities of the wound track are often more quickly visible. The aperture in a muscle sheath is enlarged. Damaged and infected muscle is cut away until healthy bleeding muscle is encountered. The wound is followed from muscle to muscle, and wherever a *fascial layer is encountered, the opening* must be adequate. It may be necessary to resect the whole belly of a muscle. Excision of infected muscle must be thorough. It is important to realize that the limit of the gas does not necessarily correspond with the limit of the gangrene; the gas often extends beyond the gangrene for as much as several inches. After débridement has been completed, sulphathiazole powder is applied to the interior of the wound. The wound is then packed with vaseline gauze and immobilized.

Case 2. A soldier was seen three days after the right arm had been shattered by a bomb fragment; the arm had been disarticulated in an ambulance train. On admission he was in great pain, with a pulse of 120 and signs of toxemia. Morphia and a hot sweet drink were given, and in an hour and a half he was taken to the theatre. The wound had the characteristic musty odor, the skin edges were moist, swollen and purple. The discharge was copious and malodorous, and extensive crepitation could be obtained. The few sutures were removed, and skin flaps were retracted after excision of all unhealthy skin. The pectoral, supraspinatus, infraspinatus and trapezius muscles showed extensive areas of gangrene, being greenish-black in many parts. All necrotic muscle was excised until healthy, bleeding and contracting muscle was found. A wide exposure was obtained by suitable skin incision, but no healthy skin was sacrificed. A generous quantity of sulphonamide powder was placed in the wound. The operation time was one hour, and a pint and a half of stored blood was given slowly. During the next five days the dressing was left undisturbed as the general conditions showed steady improvement. The wound was then inspected and was found to be quite healthy. The patient was discharged to the United Kingdom.

Cauterization or electrocoagulation of affected muscle. Excision of large masses of muscle cannot be undertaken lightly in a patient suffering from shock and/or profound toxemia. Afonso pleads for the more frequent use of a cautery or surgical diathermy in relevant cases, for by this method a gangrenous wound may be transformed into a granulating wound. No infected muscle should escape the cautery. If, at the first attempt, cauterization is not possible, it should be finished on the following day. Two days after cauterization most of the necrotic tissues will be found to be dry and shrivelled like smoked meat. This coagulated tissue can then be removed easily with scissors.

Amputation is still the safest form of treatment in many cases of acute fulminating gas gangrene. When the infection is associated with a compound fracture, when the vascular supply to the limb is impaired, or when the infection has invaded so deeply as to make excision of muscle impracticable, a rapid amputation has often saved the patient's life. In cases involving muscles below the knee, disarticulation through the joint is preferable to section of the femur. Shock is reduced to a minimum, and a studied amputation can be performed at a later date.

Since gangrene extends more rapidly and to a higher level in the muscles than in the skin, there is nothing to be said in favor of the guillotine amputation.

Nightingale, in a large experience of cases of gas gangrene, states that during the war of 1914-18 he never did a guillotine amputation, and after a short experience of turning back flaps and leaving the wound open, he abandoned that method, as the shock was too severe. He simply packed the wound with gauze soaked in flavine, and secured the flaps in position with two sutures. In a very large proportion of cases he was able to close the wound in two or three days by delayed primary suture. Mullally says: "Never sew the flaps together;

just pack the wound with gauze and bandage it firmly."

After sectioning the bone all the neighboring muscles must be inspected carefully. If one muscle, or group of muscles, is affected it must be excised up to healthy bleeding muscular tissue. "In amputating for gas gangrene, if it is found that one or more muscles are gangrenous at the level of their section, do not change your plan. Finish the amputation, and then split the stump widely and excise the diseased muscle." (Mullally.)

Serotherapy. Provided adequate precautions are taken to avoid anaphylactic complications, the intelligent use of serotherapy can only be in the patient's interest. The therapeutic dose of polyvalent serum recommended by the Medical Research Committee is as follows: 00 I.U. of Cl. welchii, 3750 I.U. of Cl. ptique and 2500 I.U. of Cl. edematiens. The serum is warmed and given intravenously, and the dose is repeated as necessary if toxemia persists. Alternatively, the serum can be combined with an intravenous drip.

Monovalent antitoxins are available for more intensive therapeutic use in cases where the organism has been identified.

Chemotherapy. Evidence is accumulating to show that locally sulphathiazole is the most effective compound in all cases, and sulphanilamide is better than sulphapyridine in the frequent B. welchii infections (Hawking). No safe dose given orally will produce temporarily such a high concentration in a wound as local application.

It is recommended that immediately before an operation for gas gangrene combined serum and sulphonamide therapy may protect the patient against an exacerbation of the infection.

MASSIVE GAS GANGRENE OF MUSCLE

In many instances the gangrenous process is localized more or less to one muscle or group of muscles; this, indeed, is a characteristic feature of gas gangrene. Occasionally the gangrenous process is surprisingly limited. Nightingale cites a case where the infection was confined to the infraspinatus, and this muscle was removed in a semi-liquid condition by simply wiping it off the scapula with a swab, leaving the bone as bare as a skeleton. When gas gangrene is limited to a muscle or group of muscles, patients are not so desperately ill as those in group 1, but if adequate treatment is delayed they usually soon become profoundly toxic.

GAS ABSCESS

Gas abscess is common when the missile has lodged in a wound, and frequently gas can be seen bubbling out. Patients with this variety of anaerobic infection are seldom seriously ill. A radiograph shows the size and precise site of the foreign body, and also any associated bony injury. Treatment consists in removal of the foreign body without delay, free drainage, the administration of serum and an adequate course of chemotherapy.

SUBCUTANEOUS GAS INFECTION

The subcutaneous tissues are involved without infection of the deeper planes. There is a crepitant area round the wound with more or less widespread khaki discoloration of the skin; this may extend as much as 10 in. beyond the wound. Skin discoloration does not imply that there is gas gangrene in all the muscles beneath. Unless this is realized amputation may be undertaken when it is unnecessary. If the wound is enlarged it will be found that the discoloration of the skin bears little relation to the extent of the muscular involvement. After excising discolored muscle in the usual manner, it is only necessary to make multiple incisions into the discolored skin. These incisions should not penetrate the fascia; this is an important point.

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SUMMARY

A discussion of the etiology of gas gangrene brings out the fact that clothing worn by the victim, rather than highly manured soil, is the major factor in the infection of war wounds by gas-producing organisms. Predisposing factors are: penetrating wounds; decreased vascularity; vascular injury; prolonged use of a tourniquet; or hemorrhage followed by general anemia.

Four clinical types of gas gangrene are:

1. Acute fulminating gas gangrene
2. Gas gangrene of the muscle
3. Gas abscess
4. Subcutaneous gas infection

Treatment consists of early operation combined with serotherapy and chemotherapy. Excision of all infected muscle must be done unless the patient is in shock or has profound toxemia. In this case, cauterization or electrocoagulation of the affected muscle is recommended.

SUMARIO

El estudio clínico de la gangrena gaseosa revela que la ropa o vestidura de la victima es el factor de mayor importancia en la infección de las heridas de la guerra por los organismos productores de gas. Los factores predisponentes son: las heridas penetrantes; los traumatismos vasculares; el uso prolongado del torniquete; y las hemorragias productoras de anemia general.

Son cuatro los tipos clínicos de gangrena gaseosa como siguen:

1. La gangrena gaseosa fulminante
2. La gangrena gaseosa muscular
3. El abceso gaseoso
4. La infección subcutanea gaseosa.

El tratamiento consiste en la intervención quirúrgica inmediata combinada con la seroterapia y la quemoterapia. Se debe practicar la excisión completa de los segmentos musculares que están infectados, siempre y cuando el paciente no esté en shock o en el estado de toxemia profunda, en cuyo caso es preferible el practicar la cauterización o la electrocoagulación del músculo afectado.

RÉSUMÉ

Dans l'étiologie de la gangrène gazeuse, les vêtements du malade joue un rôle plus important que l'engrais des terres riches. Cette complication des plaies de guerre est due aux organismes gazogènes. Les facteurs prédisposants sont: plaies pénétrantes; vascularité diminuée; lésions vasculaires; emploi prolongé du tourniquet; hémorrhagie suivie d'anémie grave.

La gangrène gazeuse presénte les modalités cliniques suivantes:

1. Gangrène gazeuse aiguë foudroyante
2. Gangrène gazeuse du tissu musculaire
3. Abcès gazeux
4. Infection gazeuse sous-cutanée

Le traitement: opération précoce combinée avec la serothérapie et la chimothérapie. Excision de tout le tissu musculaire infecté, si le malade n'est pas profondément toxemié ou s'il n'est pas dans le choc traumatique. Dans les cas de cette nature, la cautérisation ou l'electro-coagulation des muscles infectés est recommandée.

Выводы

Одежа больного играет более важную роль в этиологии газовой гангренозной заразы, чем почва снабженная наво-

зом. Предполагающие моменты это проникающия раны, понижение васкуляризация, продолжительное накладывание турникета, и кровотечение с последующим малокровием.

Существуют четыре клинически типов:

1. Острая быстротекущая инфекция.
2. Газовая гангрена мускула.
3. Газовой абсцес.
4. Подкожная газовая инфекция.

Лечение состоит из скорой операции, серотерапии и химотерапии.

Нужно иссекать весь заразительный мускул если больной не в стаде шоха или глубокой токсемии. В последних случаях автор рекомендует каутеризацию или электрокоагуляцию поврежденного мускула.

El Diagnóstico del Cáncer Gástrico Incipiente*

(Diagnosis of Incipient Carcinoma of the Stomach)

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SUMMARY

The author thinks that the diagnosis of gastric cancer constitutes one of the most difficult and painful problems of surgery, and, for this reason, he has published various works of prophylactic propaganda in Uruguay and abroad so as to obtain the proper diagnosis of incipient gastric cancer at a time when surgical treatment may still be radical and efficacious.

Only one out of four cases of gastric cancer generally may be successfully treated. In our practice we have been able to gastrectomize only one case out of nine (12 per cent operable cases).

The following causes are responsible for such a late diagnosis of gastric cancer with the corresponding failures of the treatment. From 15 to 20 per cent of the cases have a latent development, and the patients are seen when it is already too late. In 25 to 30 per cent of the cases the patients, although they have gastric symptoms, do not see a physician in time, and thus they are to blame if a radical and efficacious treatment cannot be applied.

In 40 to 50 per cent of the cases of gastric cancer, the physician is responsible for the proper diagnosis of incipient gastric cancer and the lack of proper treatment.

The clinical and laboratory findings alone are insufficient to establish the diagnosis of incipient gastric cancer, as the diagnosis is made late in the stage and treatment generally fails.

X-ray is the best guide in establishing the diagnosis of incipient gastric cancer. This examination must be made by a competent roentgenologist and should be repeated as many times as is necessary.

The success of the treatment depends fundamentally upon an early diagnosis. Every patient suspicious of having gastric cancer should be kept under continuous medical su-

pervision. The radiologic and clinical examinations should be repeated at short intervals until a positive diagnosis is established, when radical and efficacious treatment may still be applied.

EL DIAGNÓSTICO del Cáncer Gástrico (C.G.) incipiente, vale decir el diagnóstico hecho a tiempo para que el tratamiento quirúrgico pueda ser eficaz, constituye uno de los problemas más difíciles y angustiosos de la clínica quirúrgica.

Es en esta disciplina médica, donde se pone bien de manifiesto la impotencia profesional, para realizar oportunamente el diagnóstico del cáncer gástrico inicial, al punto que, sobre cada 4 casos de cáncer del estómago, solamente en uno, puede tentarse una intervención radical; estadística desoladora pero superior, a la que aceptamos más corrientemente y que parece confirmar la práctica de que en cada 10 casos de C.G. sólo en uno se puede tentar una operación radical y eficaz.

La experiencia clínica y universal ha comprobado plenamente *que el diagnóstico del C.G. incipiente, realizado enseguida de su iniciación, parece ser una práctica clínica, muy difícil o irrealizable, aunque el paciente sea observador y de conciencia el médico.*

Si pretendemos analizar los hechos que justifican y fundamentan estas conclusiones, nos encontramos con las siguientes constataciones aceptadas ya, en la práctica. *Generalmente el C.G. se presenta en la clínica como una lesión inoperable.*

Para la mayoría de los cirujanos, de cada 4 casos de C.G. se puede operar 1 caso con éxito, según otros, sólo cada 6 o 8 casos, es practicable el tratamiento radical en 1 solo caso y para algunos cirujanos, establecen la ralación de 1 a 9.

La estadística del C.G. realizada en nuestra clínica durante 10 años ha dado: 139 casos de C.G.; de los cuales 106 casos en el hombre y 33 en la mujer.

De los 106 casos de C.G. en el hombre, 66 eran inoperables, la mayoría con metástasis, de los cuales fallecieron 13 casos en el Servicio, poco después de su ingreso. Veinte y siete casos fueron tratados con una celiotomía exploradora o una gastro-enterostomía paliativa.

Sólo en 13 casos, el 12 por ciento, se pudo realizar una gastrectomía, pero en algunos enfermos las lesiones eran tan avanzadas, que en estos 13 casos, tuvimos 8 curas operatorias y 5 fallecidos.

En los 33 casos de C.G. en la mujer, 21 casos eran inoperables, 9 casos fueron tratados por una celiotomía exploradora o una gastís enterostomía y sólo en 3 casos, 9,9 por ciento, se pudo realizar una gastrectomía, con una cura operatoria y 2 casos fallecidos.

En resumen, 139 casos de C.G. con solo 16 casos en que se pudo tentar el tratamiento radical, lo que quiere decir, que se pudo operar 1 caso cada casi 9 pacientes; lo que viene a confirmar el concepto de extraordinaria inoperabilidad de la población hospitalaria, del C.G. en nuestro país, dado que según nuestra estadística, da el 89 por ciento de inoperabilidad y el 11 por ciento de operabilidad. No se pueden pedir resultados más desalentadores y decepcionantes.

Estos son los resultados que la estadística establece para nuestra Clínica, sería muy conveniente que todos los servicios de cirujía realizaran también sus estadísticas, a fin de establecer cantidades totales del C.G. en nuestro país, con datos de la mayor precisión.

Según Friedernvald de la Clínica de Mayo en 1914, sobre 1000 casos de cánceres gástricos, la resección sólo fué posible en el 3.3 por ciento. Entre y 1918, en 1,408 casos de C.G. la resección fué practicada en el 20 por ciento. Entre 1920 y 1925, sobre 2,800 casos la cantidad de gastrectomías fué el 25 por ciento, proporción que no ha variado hasta la fecha. (Citado por Bonorino Udaondo.)

Nuestra práctica en la clientela privada, confirma en pequeña escala, lo que ocurre en la asistencia hospitalaria, aunque la cantidad de pacientes inoperables, no es tan elevada (4 gastrectomías en 10 casos), lo que nos ha permitido obtener varios casos de curación de C.G. por gastrectomía, con 2, 3 y 4½ *años de sobrevida y contamos con* 2 casos con 9 y 16 años respectivamente, de persistente curación.

Nuestra ultima serie de 10 casos se descompone así en 6 casos de cánceres *inoperables se realizaron 2 celiotomías* de exploración y 4 gastroenterostomías paliativas. Se realizaron 4 gastrectomías; 1 que falleció pocos días después de la operación; de las otras tres, un caso vivió 4½ años, otro 2½ y un año, otro. Anualmente he realizado en ciudad, alrededor de unas 10 a 15 consultas por C.G. inoperable, que en 10 años, representa unos 100 a 150 casos más, de C.G. inoperable, que deben agregarse a la estadística de los enfermos condenados irremediablemente.

La latencia en la evolución del C.G. y la imposibilidad de poder establecer un diagnóstico de la lesión inicial, son los dos elementos que contribuyen a obtener tan desastrosos resultados en el tratamiento de esta temible localización del cáncer. La localización del C.G. en las paredes de este órgano, fuera de los orificios, tiene generalmente una evolución sigilosa y latente y cuando se pone en evidencia, ha adquirido ya proporciones irreparables.

Quiere decir pues, *que fatalmente un determinado número de C.G. latentes, cuyo número no podemos precisar, se presentarán al clínico, en estado de inoperabilidad.*

Además, *el diagnóstico del C.G. incipiente es muy difícil de asegurar, por la imprecisión e inseguridad de los síntomas del comienzo* y por eso, *el diagnóstico clínico sólo puede ser de presunción.*

Si tratamos de investigar y sintetizar las causas que originan el retardo del diagnóstico del C.G. incipiente y su tratamiento oportuno, cuando la gastrectomía tiene grandes probalidades de tener éxito, encontramos que tres son las razones fundamentales.

Que en un 15 a 20 por ciento de los casos de C.G. esta afección evoluciona en una forma silenciosa o latente en que el enfermo no tiene molestia alguna y cuando la lesión se manifiesta, es cuando ella ha adquirido un gran desarrollo y es ya inoperable. En estos casos *es la misma enfermedad la causante de que la lesión no se haya diagnosticado ni tratado antes.*

En otro grupo de enfermos que oscila entre el 25 y el 30 por ciento de los casos, son los mismos pacientes los que impidieron el diagnóstico y por lo tanto, toda posibilidad de tratamiento; porque, a pesar de haber tenidos molestias y síntomas, no han acudido al médico. En este segundo grupo son *los mismos pacientes, los causantes del diagnóstico tardío y la falta de un tratamiento oportuno.*

Finalmente, una cantidad de pacientes de C.G. que represente el grupo más numeroso, puesto que varía entre el 40 y el 50 por ciento de los casos, en que el retardo del diagnóstico y el tratamiento del C.G. se debe al médico, que por no haber pensado de inmediato en el C.G., porque los síntomas no eran claros o evidentes, se perdió tiempo con exámenes y tratamientos inocuos, mientras la lesión cancerosa evolucionaba rapidamente, perdiendo así la oportunidad de un diagnóstico incipiente y lo que es peor, haber perdido un tiempo precioso y tener que realizar la gastrectomía, cuando el cáncer había adquirido un gran desarrollo. En esta circunstancia, *es el médico el principal responsable, de que el diagnóstico y el tratamiento oportunos del C.G. no se hayan realizado a tiempo y oportunamente.*

Quiere decir pues, que en el retardo del diagnóstico del C.G. incipiente, hay tres causas fundamentales, de las cuales, la primera o sea *la latencia de la enfermedad,* parece ser fatal y muy difícil de modificar sus consecuencias, por más que nos preocupemos. La segunda vale decir, el descuido y abandono por parte del enfermo, puede ser modificada y corregida favorablemente, si nos preocupamos activamente de realizar una propaganda práctica e inteligente en el público, con el fin de establecer una severa profilaxis contra el C.G. En este sentido son muy significativos y demostrativos, los cuadros gráficos del Instituto Experimental de Buenos Aires, para estudio y tratamiento del Cáncer, que dirije el Prof. Roffo, donde puede constatarse, que hace 15 años, 1924, los pacientes cancerosos que acudían al Instituto, con más de 6 meses de evolución de su cáncer, alcanzaban al 81.75 por ciento, y que en el año 1939, los cancerosos atendidos en ese mismo Instituto, con más de 6 meses de evolución del cáncer, sólo representan el 16.53 por ciento.

He aquí, un triunfo inicial, que representa un magnífico resultado de la lucha social contra el cáncer.

En lo que respecta a la tardanza y retardo del diagnóstico del C.G. incipiente, por culpa de médico esto represente un problema fundamental para la clase médica, donde va involucrando todo su decoro y reputación. Es de capital importancia que médicos y cirujanos, adquieran práctica y experiencia en el diagnóstico del C.G. incipiente, con enseñanzas y disciplinas especiales para llenar correctamente y a conciencia esta función y tener muy presente siempre, que en materia de patología gástrica, toda dispepsia por banal que sea, después de los 40 o 50 años, debe hacer pensar fundamentalmente en el C.G., para investigarlo y pesquizarlo con todo cuidado y dedicación. *Esta conclusión, debe representar un dogma o principio, de patología gástrica, en los pacientes de más de 40 años.*

Debemos hacer honor a la vocación de nuestra ciencia y de nuestro arte y para ello, no podemos aceptar la infamante inculpación de que no podemos salvar a los pacientes de C.G. porqué no sabemos diagnósticar la lesión oportunamente. Trataremos de establecer aquí, las directivas profesionales a que debemos someternos para cumplir con nuestro deber profesional en el C.G.

Los profesionales y clínicos aceptan unanimemente *la falta de valor positivo y la insuficiencia de la semiología clínica* del C.G. incipiente. La sintomatología clásica representada por la dispepsia inicial, manifestada por la *impresión de plenitud pesantez y malestar después de las comidas,* a veces, con eructos y regurgitaciones, son signos banales, que sólo pueden representar cierta presunción diagnóstica en pacientes de edad avanzada, de 50 a 60 años. Esta dispepsía, suele acompañarse de *falta de apetito, sin entusiasmo por la comida,* porqué estos enfermos encuentran *los alimentos desabridos o de gusto desagradable.* Suelen perder el gusto y la afición por el tabaco y apesar de fumar menos o nada, aparece un *adelgazamiento* que es progresivo, no obstante los esfuerzos realizados para evitarlo. Estos enfermos se sienten *cansados,* con *pérdida de fuerzas* y el tinte de la piel cambia haciéndose *más pálido o amarillento.* cosa u [illegible] muy frecuentemen[illegible] *anemia,* que se [illegible] la sangre.

Pocas veces, este síndrome dispéptico inicial, culmina con *nauseas o vómitos* y por excepción, esta iniciación del C.G. puede hacerse con *hematemesis o melena.* Toda esta sintomatología, que facilmente puede pasar desapercibida para el paciente y aún para el mismo profesional, constituye sólo una *presunción o sospecha diagnóstica,* que se valoriza con la *edad* del paciente, de los 50 años para arriba y que obliga a realizar al médico una investigación clínica cuidadosa y completa del tubo digestivo y a *vigilar atentamente la evolución* de estos pacientes, agotando los recursos del laboratorio y especialmente de los Rayos X, para llegar al diagnóstico exacto.

En los pacientes en que existe ya, tumor gástrico, con hematemesis y melena, gran pérdida de peso o caquexia; entonces *el diagnóstico del C.G. es muy fácil,* pero, desgraciadamente este *diagnóstico tardío, no sirve absolutamente ra nada,* porque el tratamiento quigico será seguramente ineficaz e inútil, aunque él sea realizado por el cirujano más técnico y experto del mundo. *La terapéutica exitosa del C.G. está más en relación con el momento oportuno de su realización, que con la perfección de la técnica realizada.* Quiere decir por lo tanto, que los clínicos debemos *acostumbrarnos y entrenarnos en la disciplina del diagnóstico del C.G. por sus signos propios y no por sus complicaciones, las que constituyen signos de mayor evidencia, pero fatalmente tardíos.* Esto indica y justifica, la necesidad imperiosa de realizar un gran progreso en la ciencia y arte del diagnóstico, a base de una educación y un entrenamiento especiales del médico general y una rigurosa disciplina del mismo médico especializado, si se pretende llegar al diagnóstico oportuno del C.G. incipiente.

La intervención del laboratorio en el diagnóstico del C.G. incipiente, poco o nada ha contribuído a perfeccionar los resultados de este diagnóstico y conste que nos referimos al *cáncer inicial,* porqué si bien es cierto, que el quimismo gástrico y demás exámenes de laboratorio, nos han dado datos importantes en el C.G. ya desarrollado; en cambio, en el C.G. incipiente, dado que la lesión *neoplásica está limitada a milímetros; a lo sumo, a contados centímetros, no tiene ésta, porqué alterar la función fisiológica del estómago* y la investigación del laboratorio será negativa en estos momentos de la evolución inicial del cáncer. El quimismo gástrico, la anaclorhidria o hipoclorhidria, la citología gástrica, ni la investigación de la sangre en el líquido gástrico, ni en las materias fecales, no nos ayudarán absolutamente en el diagnóstico, porque estos signos, no deben ni pueden existir en este momento inicial del C.G.

En suma pues, *la clínica y el laboratorio son insuficientes e impotentes para establecer el diagnóstico del C.G. incipiente.*

Categórica conclusión unanimemente aceptada por médicos y cirujanos, que además establecen *que la única disciplina diagnóstica capaz de realizar este diagnóstico incipiente y en oportunidad, es la radiología.*

Gutmann en el Congreso Internacional de Gastroenterología de 1937 dijo: "*que contrariamente a la opinión habitual, el diagnóstico radiológico del C.G. incipiente,* es posible en un gran *número de casos.*" Esta afirmación de Gutmann, al parecer exagerada y pretenciosa, tuvo *una primera comprobación en un caso,* que fué, diagnósticado radiologicamente de C.G. y operado por Gosset, quien, ni en la operación, ni a la palpación, ni al exámen visual de la mucosa gástrica, encontró nada que justificase la gastrectomía, por lo cual el acto operatorio, se limitó a la simple exploración; *teniendo que reoperar este mismo enfermo meses más tarde, con un cáncer ya evoluciona-*

do. Una golondrina no hace verano, pero la experiencia ha comprobado ya, que la afirmación de Gutmann, puede ser exacta siempre que se utilice una buena técnica y se disponga de aparatos perfeccionados de Rayos X. Por lo mismo que hemos admitido la insuficiencia o la imposibilidad de la clínica sóla, para realizar el diagnóstico del C.G. incipiente, debemos tener bien presente a fin de evitar errores groseros, que como dice bien Gutmann: "no existe clínica sin radiología y que no hay radiología sin clínica."

Este mismo autor, ha establecido con toda precisión, las recomendaciones técnicas, de valor fundamental para tener éxito en el diagnóstico del cáncer que estudiamos. Según él, el diagnóstico del C.G. incipiente, es "*esencialmente radiográfica, que necesita radiografías perfectas para establecerlo, las radiografías mediocres son inútiles y las radiografías bastante buenas son peligrosas por la falsa seguridad que originan.*"

Es fundamental realizar, "*varias radiografías en cada exámen radiológico y repetir estos exámenes; hay que evitar pues, realizar una sola radiografía y un solo exámen.*" Habrá que tener bien presente, "que en el diagnóstico del C.G. *incipiente, la radioscopía es un medio de contralor, pero no un medio de diagnóstico.*" Aunque se le quita valor diagnóstico a la radioscopía porque como lo afirma Gutman: "una lesión de C.G. visible netamente a la radioscopía, no es ya, un cáncer incipiente" y en este caso especial, no debemos olvidar que la *radioscopía en acecho,* servirá eficazmente para radiografiar oportunas y significativas imágenes gástricas, que nos permitirán establecer el diagnóstico exacto. El diagnóstico del C.G. incipiente es tan capital y básico para el resultado del tratamiento, que los internistas no han tenido inconveniente en aceptar, "que mueren más pacientes por errores y por ignorancia de la técnica radiológica, que los que mueren por imprudencia o desconocimiento de la técnica quirúrgica." Lo fundamental de la radiología y que significa un gran progreso, sobre los demás métodos de exámen, es que ella puede revelar un C.G. incipiente cuando la palpación y el exámen visual directo de la mucosa, practicados cuidadosamente por el cirujano, durante la operación, *no revelan ninguna lesión patológica.* Es ésta una conclusión, de gran perplejidad, de enorme responsabilidad y de resultancia desconsoladora, para la cirujía, puesto que la exploración directa manual y visual del estómago, *que considerábamos los más preciso y seguro, es aventajado por la radiología.* La práctica y la experiencia establecerán en breve, cual es el criterio que debe primar y sobre todo, cuando logremos establecer con que retardo marcha la exploración quirúrgica al exámen radiológico; por eso Gutmann establece "que en el C.G. estrictamente inicial, no corresponde la laparotomía exploradora" puesto que ella puede ser equivocadamente negativa y que por lo tanto, *es antes de la operación, por estrecha colaboración de la clínica y la radiología,* que debe establecerse el diagnóstico del C.G. y la conducta terapéutica. (Gutmann).

En suma pues, el diagnóstico del C.G. debe marchar con ritmo rápido y acelerado, sin ninguna pérdida de tiempo, que puede ser fatal y una vez por todas, a los médicos, a los clínicos, a los cirujanos y a los radiólogos, hay que decirles, repetirles y gritarles, que para hacer el síntomas de complicación del cáncer y diagnóstico del C.G. incipiente hay que olvidar completamente la semiología clásica del C.G. que está basada en los síntomas iniciales de simple presunción que deben guiarse, para llegar a tiempo y realizar un diagnóstico oportuno del C.G., en los signos propios del cáncer, *clínica y por eso hay que recurrir, a un estudio completo radiológico.* No me ocuparé del estudio técnico del exámen gástrico por medio de los Rayos X, ante todo, porque no tengo competencia para ello y además porque este estudio crítico nos llevaría mucho más allá de los límites precisos de esta comunicación y sin resultado práctico alguno; pero, tenemos el deber y la obligación de alcanzar esas conquistas radiológicas, en el afán de poder realizar en nuestro país, el diagnóstico del C.G. incipiente, de acuerdo con las directivas y enseñanzas establecidas por los investigadores que hañ realizado esta obra de progreso diagnóstico. Hemos solicitado la autorizada opinión de dos jefes de Servicios de Rayos X, de los hospitales más importantes de Montevideo, destacados radiólogos uruguayos, que han tenido la delicada atención cultural, de sintetizar su opinión sobre el diagnóstico del C.G. su iniciación. Nos han contestado, rcia (P), jefe del Instituto de Rayos X del Hospital Maciel y Pelfort (G.) jefe del S.R.X. del Hospital Pasteur; opiniones valiosas para completar esta comunicación y cuya colaboración, verdadera gentileza científica agradecemos muy sinceramente.

Barcia, nos declara que hasta ahora no ha tenido ocasión de realizar diagnósticos radiológicos en el C.G. sin que en el acto operatorio no se encontrasen alteraciones orgánicas evidentes. Considera apesar de los grandes progresos de la radiológico que es difícil realizar el diagnóstico del C.G. incipiente, porque los pacientes llega tardíamente al radiólogo. Los diagnósticos eficaces, no se realizan "porque el enfermo no llega oportunamente al examen radiológico." Pelfort opina que el diagnóstico del C.G. incipiente, es difícil, que requiere un exámen radioscópico y radiográfico muy minucioso, realizados por un radiólogo muy competente.

Considera indispensable para lograr este diagnóstico, realizar exámenes repetidos o seriados y durante el tiempo que sea necesario y actuar en una íntima colaboracíon con el clínico y el cirujano.

En resumen pues, algunos radiólogos de los más autorizados de nuestro país, que conocen perfectamente las técnicas modernas y los progresos del diagnóstico del C.G. incipiente no nos contestan categoricamente, *confirmándonos la gran dificultad de lograr el diagnóstico del C.G. incipiente* y en cambio, los encontramos quejosos de no poder cumplir a satisfacción con su misión, por falta de personal de material radiológico perfeccionado, indispensable para un diagnóstico tan preciso como es el de C.G.

Pero, los cirujanos que somos los encargados de poner en práctica la eficaz colaboración diagnóstica de los radiólogos, podremos establecer los éxitos de estos técnicos, al operar los casos de C.G. en que nos hayan establecido ese diagnóstico en el período inicial de la lesión.

Y bien, podemos honesta y sinceramente contestar, en lo que nos es personal, que no hemos podido comprobar ningún resultado efectivo y eficaz, como resultado directo del último progreso alcanzado por la radiología, en el diagnóstico del C.G. incipiente. Apesar de nuestros entusiasmos e inquietudes, por alcanzar la realización común y corriente del diagnóstico del C.G. incipiente, *no hemos logrado aún, el diagnóstico de un solo caso de C.G. verdaderamente incipiente,* después de la generalización de la activa campaña diagnóstica emprendida, y la emulación franca, de clínicos, radiólogos y cirujanos en la conquista de este diagnóstico incipiente e inicial.

Esta es la verdad franca y desnuda de nuestra experiencia profesional; hasta ahora, no hemos tenido ocasión de operar ningún caso de C.G. *inicial o* incipiente, diagnosticado por la radiología; otros colegas, quizás hayan sido más felices que yo, pero, por el silencio que reina alrededor de este importante asunto, es lógico suponer, que a los demás cirujanos les ha ocurrido algo semejante a lo que a mí. Más aún, en mi práctica profesional, he podido comprobar, que en exámenes radiológicos practicados por técnicos muy preparados y distinguidos, pasaron desapercibidas lesiones avanzadas de C.G. y en algunos casos, la radiología me incitó a la operación, por admitir una lesión limitada cuando la clínica nos inclinaba hacia el diagnóstico de una lesión muy extendida; quizás inoperable, confirmándose en varios casos esta última opinión.

Quiere decir pues que la radiología, no ha representado aún para nosotros, en las lesiones iniciales o incipientes del C.G., ese elemento preciso de orientación y diagnóstico de que nos hablan las grandes autoridades radiológicas, que han pretendido realizar esa gran revolución y progreso diagnóstico en el C.G.

¿Como se explica esto? Posiblemente dos factores contribuyen a explicar estos deficientes resultados; por un lado, Gutmann y demás creadores de la nueva técnica radiológica perfeccionada, han sido muy optimistas o quizás hayan exagerado la posibilidad del diagnóstico del C.G. incipiente y en cambio, nuestros técnicos, tal vez no dominen a la perfección esa técnica y lo que es casi seguro, que no dispongan de un personal especializado, ni cuenten con los aparatos prefeccionados, ni el suficiente material radiológico, para llegar a tan precisos resultados. De cualquier manera que sea, es de desear y así lo esperamos de nuestros técnicos radiológicos, bien preparados y capacitados, que esa conquista será una brillante realidad en un futuro próximo.

Por nuestra parte hemos demostrado celo e inquietud por obtener los enormes beneficios del diagnóstico del C.G. incipiente y de acuerdo con las conclusiones del Congreso I.° de Gastroenterología de 1937 y de la reciente y monumental obra de Gutmann, nos entrevistamos con Barcia, director del Servicio radiológico del Hospital Maciel, a fin de obtener su colaboración diagnóstica radiológica, efectiva e inteligente, de acuerdo con los postulados y directivas de la técnica radiológica más perfeccionada, tratando de obtener el *personal especializado* en el exámen de cada víscera y la *repetición de las radiografías necesarias.* Barcia, hombre amante del progreso y del perfeccionamiento técnico, accedió encantado y de inmediato a nuestro pedido; nos prometió encargar a un asistente de los exámenes gástricos exclusivamente y nos ofreció la máxima colaboración.

En la práctica, nada hemos conseguido hasta ahora, porqué no hemos logrado la realización de ningún diagnóstico de C.G. incipiente, al parecer por varias razones fundamentales. Posiblemente porque no enviamos al exámen, a ningún paciente en el período verdaderamente inicial del C.G. o por *falta de películas para realizar exámenes radiológicos repetidos o seriados en cada caso,* al punto que, recientemente enviamos a ese servicio de radiología, un paciente, con el encargo de investigarle cuidadosamente un C.G. y le practicaron *una sola radiografía.* Se nota además, *la ausencia de un buen aparato que permita realizar sin pérdida de tiempo y con perfección, las radiografías necesarias para establecer un diagnóstico preciso del C.G. incipiente.* Nos consta que actualmente el Instituto de Radiología del Hospital Maciel, cuenta con un aparato radiológico perfeccionado, que aunque de prestado y de uso temporario permite, realiza correctamente la investigación radiológica del C.G. incipiente. Falta también el *personal técnico especializado y remunerado,* por cuya ausencia hay que recurrir al personal honorario.

Si estas fuesen las causas reales y efectivas, de que no se pudiese realizar en nuestros hospitales, el diagnóstico del C.G. incipiente; *nos unimos entusiastamente al pedido del Jefe de Servicio Radiológico del Hospital Maciel y de los demás servicios radiológicos oficiales, que sabemos opinan lo mismo, para conseguir ese material indispensable, más aún, dirijimos el angustioso S.O.S. de auxilio, al Ministerio de Salud Pública y a la Facultad de Medicina, solicitándoles el material necesario de películas y de aparatos radiográficos más perfeccionados, para poder tener la posibilidad de realizar oportunamente, el diagnóstico del C.G. incipiente de los enfermos que acuden a tiempo, en demanda de salvación y pue representan antas vidas, que si no cuentan con este curso técnico, quedarán fatalmente ndenadas.*

Algunos laboratorios radiológicos particulares, pretenden realizar con sus medios, el diagnóstico del C.G. incipiente; si esto es así, veríamos con gran placer la publicación de estos resultados y estadísticas, en las principales Sociedades científicas del país y si el hecho es verdadero, trataremos de generalizar esos métodos a los Servicios hospitalarios, puesto que sería injustificable e inaceptable, que las primicias diagnósticas que se obtienen particularmente, no se establezcan de inmediato en las clínicas oficiales.

En suma pues, el perfeccionamiento y la oportunidad del diagnóstico del C.G. incipiente en nuestra práctica ha fracasado o no ha tenido el éxito esperado, apesar de nuestro afán y nuestra inquietud por aplicar los métodos más adelantados y más perfeccionados del momento. ¿Ocurre lo mismo en la clientela privada? Nuestra opinión es que en la práctica privada, ocurre algo muy semejante pero preferimos por ahora, no considerar esta parte del problema.

Es evidente, que cuando decimos que la radiología no ha representado para nosotros, el método ideal y preciso de diagnóstico del C.G. incipiente, que constituiría la panacea para resolver el complejo problema terapéutico del cáncer gástrico; no pretendemos inculpar a la radiología, de que no realice la mayoría de los diagnósticos de C.G. que no fueron exáminados oportunamente por la radiología.

Pretender tal absurdo, sería como inculpar a la cirujía, el no curar a los pacientes que no operó a tiempo y en oportunidad. Nuestras consideraciones se refieren al hecho comprobado, de que no conocemos aún en nuestro medio casos de C.G. incipiente, diagnósticados por Rayos X y que no presentarán aún, lesiones macroscópicas; esto puede deberse, a que no se hayan presentado enfermos en tales condiciones a los radiólogos y entonces no es culpa de la radiología, si no se ha hecho el diagnóstico en circunstancias tan favorables al tratamiento. Nos referimos principalmente, a los casos en que existen ya lesiones orgánicas evidentes y que pueden pasar desapercibidas al exámen radiológico, o cuando esta privilegiada e importante rama de la medicina, no realiza con toda la dedicación y el perfeccionamiento técnica alcanzado hoy día, los exámenes radiológicos del estómago para investigar el C.G.

No pretendemos tampoco, pecar de injustos o ingratos con la radiología, puesto que, sentimos admiración y respeto por sus extraordinarios progresos, que tan preciosa e insustituíble colaboración nos presta para el diagnóstico; le reconocemos y le brindamos el homenaje y el reconocimiento justo que se merece y en prueba de ello, es que la cirujía acepta categoricamente, que en la actualidad, *es la radiología el único método de exámen capaz de realizar el diagnóstico incipiente del C.G.* y en tal sentido para el estómago, ha sido erijido en el método privilegiado y de elección. Ahora bien, esa elección no debe ser porque sí; la radiología por su parte, debe cristalizar en hechos y justificar con sus resultados ese sitial de honor y preferencial, en que la cirujía la ha colocado, sin discusión y sin retaceos de ningún género.

Actualmente en nuestro país, el C.G. constituye un problema diagnóstico y terapéutico angustioso, quiere decir que los, radiólogos, los médicos y los cirujanos tenemos que realizar una campaña profesional y social, que con un extraordinario esfuerzo pueda cambiar esa situación y ponernos a tono con los países más adelantados, en el tratamiento del cáncer gástrico. Pero, si no hemos logrado alcanzar el éxito esperado en el diagnóstico del C.G. incipiente; ¿debemos por eso, abandonarnos y declararnos derrotados? No, eso jamás, nuestro deber vocacional y profesional, nos obliga a luchar sin debilidad ni flaqueza, para conseguir el éxito en beneficio de nuestros semejantes que sufren.

Creemos que habitualmente en las clínicas, al investigar y pesquizar el C.G. incipiente, se comete un error serio y grosero, cuando no encontramos nada en una primera y cuidadosa investigación y entonces dejamos librado al paciente a su suerte. Aquí está el error de los clínicos, pues, si bien es cierto *que no pudimos realizar un diagnóstico de C.G. incipiente, se puede aún establecer un diagnóstico oportuno de ese cáncer, que nos permita realizar, un tratamiento eficaz y curativo.* La principal y fundamental razón de esta comunicación, es llamar la atención sobre esta cuestión básica a fin de conseguir que los médicos cambien su comportamiento actual con respecto a los pacientes del C.G., por una conducta más clínica, más lógica, que beneficiará esencialmente al resultado del tratamiento del C.G. y en consecuencia, será de gran beneficio para los propios enfermos atacados de tan terrible afección. Habitualmente cuando el radiólogo ha examinado un paciente que le enviamos sospechando un C.G. y no encuentra nada, nos contesta: *estómago y duodeno normales.*

Generalmente, ante tan categórica respuesta, *dejamos regresar al paciente para su casa, dándoles seguridades y garantías, de que no tiene nada en su estómago.* Y bien, esto constituye un grosero y profundo error de táctica clínica y terapéutica puesto que, *si el paciente tiene realmente el cáncer sospechado y que muy bien pudo pasar desapercibido al radiólogo por ser incipiente* o poco desarrollado, al irse el enfermo para la casa, no estará vigilado por el médico y no volverá ya, en 6, 8 meses o un año; pero cuando vuelva, casi seguramente presentará un gran tumor gástrico, evolución florida de su cáncer del estómago, que no pudimos diagnósticar a tiempo y el enfermo estará irremediablemente perdido, aunque lo opere el cirujano más técnico y diestro del mundo.

Si queremos diagnosticar el C.G. en oportunidad de realizar aún un tratamiento eficaz, debemos modificar fundamentalmente esta conducta, tan generalizada en la práctica médica. Estos pacientes, sospechados de C.G. deben ser objeto de una observación prudente, continuada y práctica, que nos permitirá obtener un diagnóstico del C.G. que *si no es incipiente, puede ser oportuno y permitirnos salvar al enfermo.*

Por todo lo comentado anteriormente, se concluye de que el diagnóstico del C.G. incipiente es difícil, o imposible de realizar en ciertos medios; bien convencidos de esta verdad, los clínicos deben establecer *una rigurc* [illegible] *y prolon* [illegible] *observación (días y* [illegible] *)*, en

resultados que debemos considerar como modelo de imitación y que seguramente podremos obtener si logramos realizar el diagnóstico del C.G. incipiente.

Sintetizamos nuestra comunicación, en las conclusiones siguientes—

1o. Para tener éxito en el tratamiento del C.G. es necesario e indispensable, realizar un diagnóstico inicial e incipiente de la lesión.

2o. La clínica y el laboratorio son insuficientes e impotentes para establecer el diagnóstico del C.G. incipiente; sólo la radiología es capaz de realizar este diagnóstico incipiente y en oportunidad, lo que representa una gran conquista actual del progreso diagnóstico.

3o. El perfeccionamiento técnico del exámen radiológico, está regido por reglas precisas e inflexibles, contenidas y analizadas en el texto; pero a pesar de todo, debemos declarar sinceramente que en nuestra práctica no hemos podido beneficiar de la conquista del diagnóstico del C.G. incipiente.

4o. El diagnóstico del C.G. verdaderamente incipiente, en nuestro país, parece hasta ahora, difícil o imposible de obtener; pero en cambio ese diagnóstico puede ser aún oportuno y permitirnos salvar al enfermo. Para conseguir esto los clínicos no deben cometer más el error de desentenderse de los pacientes a quienes se les practicó un exámen radiológico que resultó negativo. Estos pacientes, de 40 a 60 años de edad en quienes se sospeche un C.G., *deben ser sometidos a una cuidadosa y asidua vigilancia médica* con realización de exámenes clínicos y de laboratorio, repetidos frecuentemente, con radiografías iterativas, realizadas cada 20 días o un mes; *exámenes seriados*, que permitirán constatar oportunamente, *la evolución progresiva de la lesión* y poder establecer el diagnóstico del C.G. en el período más vecino a su iniciación y oportunamente aún, para poder realizar un tratamiento radical.

5o. Para poder tentar el diagnóstico del C.G. incipiente, es *indispensable* que los Servicios de Radiología, cuenten con *personal especializado, aparatos del tipo más moderno y perfeccionado* y disponer de *abundante material radiológico*, para realizar exámenes repetidos y seriados.

6o. En el tratamiento del C.G., prima el diagnóstico inicial e incipiente de la lesión sobre la técnica quirúrgica, lo que quiere decir, que un C.G. incipiente, puede ser tratado y curado por un cirujano discreto; mientras que un C.G. ya avanzado, no será radicalmente curado aunque sea operado por el cirujano más técnico y diestro del mundo.

7o. Solucionado el problema del diagnóstico del C.G. incipiente, queda resuelto automáticamente el tratamiento, puesto que los cirujanos sudamericanos, haciendo honor al progreso quirúrgico universal, dominan perfectamente la técnica quirúrgica de la gastrectomía y operado el C.G. oportunamente, el éxito será el resultado inmediato de tan terrible y mortífera afección.

SUMARIO

El autor considera que el diagnóstico del Cáncer Gástrico, (C.G.), constituye uno de los problemas más difíciles y angustiosos de la Clínica Quirúrgica, por tal motivo publica en el Uruguay y en el extranjero, varios trabajos de propaganda profiláctica, a fin de conseguir la ansiada realización del diagnóstico oportuno del C.G., cuando el tratamiento quirúrgico puede ser radical y eficaz.

De cada cuatro casos de C.G., se puede habitualmente tratar con éxito, un solo caso; en nuestra práctica sólo hemos podido gastrectomizar 1 caso cada nueve pacientes. (¡12 por ciento de operabilidad!).

Las causas que explican un diagnó
tico tan tardío en

guientes fracasos en el tratamiento, son las siguientes: del 15 al 20 por ciento de los casos de C.G. evoluciona latentemente y los enfermos no acuden sino tardíamente al médico. Un 25 a 30 por ciento de los casos de C.G., los enfermos aún con molestias gástricas no acuden oportunamente al médico y son estos mismos enfermos los culpables de que no se pueda realizar un tratamiento oportuno y radical.

En un 40 a 50 por ciento de los casos de C.G. es el médico el responsable de la no realización del diagnóstico del C.G. incipiente y la falta de un tratamiento oportuno.

En la práctica fracasa la Semiología *clínica para realizar el diagnóstico del* C.G. incipiente y hay que declarar que la Clínica y el Laboratorio son insuficientes e impotentes para establecer el diagnóstico del C.G. incipiente, sólo gran un diagnóstico *tan tardío* que el tratamiento fracasa generalmente. La única disciplina médica, capaz de orientar y establecer el diagnóstico del C.G. incipiente es la Radiología, exámen que debe ser realizado por personal competente y repetido cuantas veces sea necesario, empleando los aparatos y un material radiológico de lo más moderno y perfeccionado.

El éxito en el tratamiento depende fundamentalmente de la precocidad del diagnóstico, pero si el cirujano no logra obtener este resultado ideal al pretender obtener un diagnóstico oportuno del C.G. incipiente; tratará de *lograr* un diagnóstico lo más próximo posible del comienzo del cáncer. para *lo cual.* en *todo* paciente, en el que sospeché un C.G. tendrá a ese enfermo bajo severa y continuada observación médica y repitirá los exámenes radiológicos y clínicos a cortos intervalos de tiempo. hasta establecer el diagnóstico en tiempo oportuno aún de realizar un tratamiento radical y eficaz.

Sólo actuando así. podrán los médicos diagnosticar a tiempo y oportunamente el C.G. y no ocurrirá como ahora que de cada 8 o 10 enfermos de C.G. puede operarse un solo enfermo, lo que constituye una vergüenza para el progreso *actual de la Medicina.*

El tratamiento de elección del C.G. es el quirúrgico: la gastrectomía amplia.

RÉSUMÉ

L'auteur considère que le diagnostic du cancer gastrique (C.G.) est un des problèmes les plus difficiles et les plus angoissants de la clinique et de la chirurgie, c'est pourquoi il publie, en Uruguay et à l'étranger, divers travaux de propagande prophylactique afin *d'obtenir le résultat tant désiré:* la possibilité de faire le diagnostic du cancer gastrique à ses débuts, alors que le traitement chirurgical peut être encore radical et efficace.

Sur 4 cas de cancer gastrique, on peut généralement en traiter un seul avec succès; dans notre pratique, nous avons pu gastrectomiser seulement un cas sur 9 malades (12 pour cent de cas opérables).

Les causes qui expliquent un diagnostic aussi tardif pour le C.G., avec l'inefficacité de traitement qui en résulte sont les suivantes: dans 15 a 20 pour cent des cas, l'evolution se fait d'une façon latente et les malades recourent trop tard au médecin.

Dans 25 à 30 pour cent des cas de C.G., les malades, même s'ils ont des malaises gastriques, s'adressent trop tard au médecin, et c'est donc la faute des malades eux-mêmes si l'on ne peut appliquer *un traitement opportun* et radical.

Dans 40 à 50 pour cent des cas de C.G., c'est le *médecin* lui-même qui est responsable de la non-réalisation du diagnostic du C.G. commençant et de la *non-application d'un* traitement *opportun.*

Dans la *pratique,* la Séméiologie clinique ne permet pas de faire le diagnostic du C.G. á ses débuts et on doit

déclarer que la Clinique et le Laboratoire sont impuissants à établir le diagnostic du C.G. à ses débuts, ils permettent un diagnostic si tardif que le traitement n'a généralement pas de succès.

La seule discipline médicale qui puisse orienter et établir le diagnostic du C.G. à ses débuts est la Radiologie; cet examen doit être fait par un personnel compétent et répété autant de fois qu'il le faudra avec des appareils et un materiel-radiologique des plus modernes et des plus perfectionnés.

Le résultat favorable du traitement est subordonné à un diagnostic obtenu à temps, mais si le chirurgien ne peut obtenir ce résultat idéal du diagnostic du C.G. a son début, il essaiera d'avoir un diagnostic aussi voisin que possible du début du cancer, et, pour cela, lorsqu'il aura un malade qu'il soupçonnera d'être atteint de cancer, il le maintiendra sévèrement sous observation et répétera à de courts intervalles les examens radiologiques et cliniques, jusqu'à ce qu'il puisse obtenir un diagnostic suffisamment à temps pour pouvoir commencer un traitement radical et efficace.

Ce n'est qu'en agissant ainsi que les médecins pourront diagnostiquer à temps et opportunément le C.G., et on évitera ce qui arrive aujourd'hui pour la honte de la médecine: sur huit ou dix malades, on ne peut en opérer qu'un seul.

Le traitement d'élection a choisir est chirurgical: la gastrectomie ample.

The History and Development of Gastrostomy*

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GASTROSTOMY has always offered fascinating material for reflection and study. Some years ago I presented a paper on tubovalvular gastrostomy before the Société des Chirurgiens de Paris. Soon following that presentation my attention was called by colleagues from the European Continent to the fact that my contribution was incomplete and it was suggested that I should have mentioned the important work of Pelletier, Panieres and others. In fact, in presenting this subject to the Academy Mexicana de Ciruga (Cirugia Cirujanos Tomo V. Mayo—Juno 1937) my bibliography was incomplete. It is my desire, therefore, to present herewith a complete résumé of the literature which follows.

It is not amiss to call attention to the fact that during the evolution of human activities credit frequently belonging to pioneers is forgotten. It is, therefore, important from time to time to review the literature, in justice to the pioneers and to record their forgotten achievements. In our own profession operations have been discovered which should be properly designated as "rediscovered," for a thorough search of the literature frequently discloses that certain operations or the conception of ideas upon which such operations are based, were born long before their "rediscovery."

1837—Egelberg, a Norwegian Military Surgeon, advised the performance of gastrostomy for cases of esophageal stricture at a meeting of the Christiana Medical Society. However, he did not perform the operation.

1842-1843—Bassow and Blondlot performed gastrostomy

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*Presented at the Third International Assembly of the International College of Surgeons held in Mexico City, August, 1941.

1846—Sedillot[1] was first to perform the operation on the human subject. He repeated this operation in

1849—and later in

1852—Both patients died from peritonitis, a usual sequelæ of abdominal operations in pre-antiseptic days. Many successful attempts were then made to perform this operation on human beings.

1853—E. Fenger's[2] operation, like all the early procedures, consisted simply in making the external incision through the abdominal wall and fastening the drawn up stomach wall in the abdominal wound by sutures or steel-needles, and then incising the drawn up part of the stomach and inserting a tube. There were many minor modifications. The operation consisted of two stages, the second being done when the original incisions were healed.

1875—Sydney Jones[3] performed the st successful human gastrostomy by e older method. This was the thirty-hird attempt to perform it on a human being.

1876—Verneuil[4], modifying Sedillot's method, also performed the operation successfully. The operation performed by Verneuil, a French surgeon, was such a rarity that his patient made it a means of livelihood, going from city to city demonstrating his fistula. This method was used by many surgeons until

1886—when von Hacker[5] proposed his technic. At that time one great obstacle usually met by the surgeon was that the opening made in the stomach permitted gastric contents to escape, frequently contaminating the peritoneal cavity and eventuating in a fatal peritonitis. Or, a sensitive skin was afflicted with painful eczemas to such an extent that many patients preferred to starve from their original illness than from the excruciating pains constantly produced by the acid gastric juice irritating the eczematous skin. To obviate this danger, surgeons of that day preferred to perform a "two-stage" operation. They sutured the anterior wall of the stomach to the anterior abdominal wall, leaving it for four or five days until secure adhesions were formed between the exposed surfaces when the stomach was opened. Von Hacker, therefore, to obviate leakage, attempted to utilize the supposed sphincteric action of the rectus abdominis muscle. He produced a fistula that passed through the left rectus abdominis muscle.

1888—Girard[6] attempted to utilize the sphincteric action of the rectus muscle to make a fistula leakage-proof.

1890—Hahn[7] formed a cone from the anterior stomach wall and fixed it to an opening made in the eighth intercostal space on the left side. He attempted to cause the intercostals to function as a valve. A small and contracted stomach could be fastened here with less difficulty than elsewhere.

1891—Witzel[8] established a canal between two folds of the anterior wall of the stomach, a large surface of the stomach was drawn through the abdominal wall, and an incision made into it to admit a small calibre rubber tube. The tube was stitched to the stomach and its upper end permitted to project from the external wound. Two parallel folds of the anterior wall of the stomach were then taken up so as to envelope the rubber tube and the free margins of the stomach wall were sutured over the tube. The bottom of the canal thus formed was left exposed at the bottom of the wound. The stomach was sutured to the anterior abdominal wall. About two inches of the rubber tube was laid in the gastric wall passage. It was now observed that a fistula passed through both the rectus abdominis and transversalis muscles which ran at right angles to each other. This was supposed to give a better sphincteric action.

1893—J. F. Ssabanejew[9] and R. Frank[10] developed the same method of gastrostomy independently. An incision two or three inches in length was made along the left lower costal border beginning at the end of the ninth rib. A cone of stomach was formed close to the cardiac end, pulled up and sutured close to the parietal peritoneum at the edge of the incision. A second incision was made close to the costal margin about one inch from the first incision and the skin between the two incisions undermined. The cone of the stomach was pulled through this channel until it projected like a nipple. The segment of stomach pulled out was then sutured to the peritoneum. The cone of the stomach was now incised and a tube inserted. For the reason that these two surgeons developed this technic independently, the procedure is frequently referred to as the Ssabanejew-Frank Operation.

1893—L. Penières[11] spoke of gastrostomy by the "valvular method" through plaiting of the mucous membrane of the stomach: "La valvule muqueuse a rempli ses fonctions prévues en empêchant la sortie des liquides. Il n'y a eu au pourtour de l'orifice ni inflammation, ni ulcération de la peau, ce qui prouve bien que si une petite quantité de liquide a pu sourdre au moment des cathétérismes, le suc gastrique est resté inclus dans la poche stomacale et n'a pas pu en conséquence ni excorier ni digérer la peau péripherique.

"Dans l'état actuel de la science, la gastrostomie, telle qu'elle a été modifiée et réglée par Terrier et ses élèves, est l'opérations de choix. Mais la muqese, qui est attirée et suturée au pourtour de l'ouverture, si elle sert de bouclier à la peau de l'orifice, ne conduit-elle pas naturellement les liquides de l'estomac audehors en dépit de l'étroitesse de l'ouverture? C'est pour remedier à ces inconvenients qûe nous avons imaginé d'utilizer le repli valvulaire qu'on peut former à son gré sur la luqueuse stomacale, ainsi que nous l'avons demontré.

"Nous avons pratiqué l'opération en deux temps, à 48 hours d'intervalle non pas tant pour favoriser la réunion séro-séreuse en toute sécurité ce qui est déjà d'un intérêt considérable, que pour permettre aux modifications prévues de la paroi stomacale de se produire partiellement avant l'établissement du trajet: rétraction de la tunique séromusculeuse exposée et développment de repli valvulaire, modifications qui d'ailleurs se sont accentuées dan les jour suivants."

Thus we see that the credit of having first conceived the idea of making a valve from the mucous membrane of the stomach belongs to Penières.

1894—Ullman[12] created a canal from the anterior wall of the stomach, but it was lined with serosa.

1894—E. Andrews and E. W. Andrews[13] described a method under the term of a "new method of valvular gastrostomy with mucous membrane lining." Thus Andrews fortified the foundation for the further development of valvular gastrostomy

1894—M. Stamm[14] described a gastrostomy by a new method as a result of his experiments on dogs.

1896—Emmanuel J. Senn[15] described a gastrostomy by a "circular valve" method. Senn constructed a "circular" valve by purse-string sutures tightened around a part of it. The projecting wall of the stomach was then fastened to the parietal abdominal wall. An incision was made in the projecting cone of stomach and the edges inverted. An omental cuff was placed around the sutured valve. The "valve" was opened by slight pressure of the tube inserted into the opening. He found that there was no leakage.

1896—Fontan of Toulouse[16] formed a valve from the whole thickness [illegible] the stomach wall or, as Fo [illegible] t:

"Elle ne se distingue des gastrostomies courantes que par le soin avec lequel la bouche stomacale a été située dans le dédoublement d'une valvule dont la formation fut réalisée extemporanément au début de l'opération. Ce procédé a pour but d'éviter la corrosion des lèvres de la plaie qui résulte si souvent des ouvertures directes; il s'éloigne aussi de tous les trajets obliques, sous cutanés, comme des opérations en deux séances et des autres manoeuvres compliquées par lesquelles on a cherche à éviter l'écoulement du suc gastrique et ses inconvénients" . . . "enfin qu'il fallait établir la bouche stomacale dans des conditions telles que l'issue du suc gastrique fut impossible." . . .

"Je dois dire que l'idée d'exécuter une opération valvulaire avait déjà été émise par M. Pelière, de Toulouse, qui, préoccupant d'opérations à accomplir les viscères abdominaux, préparait ans ce but et en plusieurs séances, sur les animaux, des valvules de muqueuse. Lorsqu'on a suturé en couronne, aux lèvres d'une plate abdominale la partie d'un viscère qui sur ce bourgeonante dont le fond est formé par la surface viscérale. Mais le bourgeonnement opérant un rapprochement des bords de la plaie, la membrane musculaire du viscère se rétractera d'une façon correspondante, tandis que la muqueuse repousée en dedans constitue un pli valvulaire. C'est cette valvule formée preablement, et aux dépens seulement de la muqueuse que M. Pelière avait obtenue dans ses recherches de laboratoire. . . .

"J'ai repris cette idée d'une opération valvulaire, en la modifiant d'une façon absolue *au point de vue organique* et chirurgical. Dans mon opération en effet toutes les couches de l'estomac font valvule, et non pas la muqueuse seulement: en second lieu, je construis la valvule de toute pièce, en une seule séance, à l'aide d'un manuel opératoire très simple." . . . "Au point de vue de l'issue des liquides stomacaux, je suis affirmer qu'elle a été nulle. Le papier tournesol mis au contact de la fistule n'a jamais rougie, et il n'y a eu ni ulcération ni excoriation."

1896—Obviously this was a fruitful year of splendid activities in gastrostomy progress. Heussner[17] formed a cone of a part of the anterior stomach wall which he sutured to the abdominal wall edges, and again in

1896—G. Marwedel[18] modified Witzel's method, making the fistula more leakage-proof. He placed the tube between the mucous and muscular coats of the stomach for a couple of inches and then between the serosa and mucosal surfaces.

1896—O. B. Carter[19] inverted a portion of the anterior wall of the stomach, as in Senn's operation, except that the inversion was carried to a greater degree by making two rows of Lembert sutures—one above and one below. He introduced a tube through a small opening in the inverted portion of the stomach. In

1896—J. Schnitzler[20] *modified the Witzel* procedure, and in

1898—M. Trofimow[21] created a gastrostomy, the principles of which are based on the well-known fact that when serosa and muscularis of the stomach are incised "die mucosa sich nach aussen wolbt." He used the mucosa as in the external covering of a flap which was formed out of the muscularis and mucosa. In

1899—Watsudji[22] combined von Hacker's method with that of Fontan's valve *formation to do a gastrostomy.* Thus to Watsudji belongs the credit of a combination principle, that is, of combining the principles of von Hacker with those of Fontan. In

1899—Lucy[23] described a method which is really a modification of

1900—Helferich's[24] who also did a modification of the Ssabanejew-Frank method to secure against leakage, and

1901—Depage[25, 26] formed a tube from the anterior wall of the stomach

1903—which was lined with mucous membrane. Thus the credit of forming the first tube to be lined with mucous membrane belongs to Depage. In

1906—E. Tavel[27] attempted to elaborate on the tube principle and resected about six inches of the jejunum (still attached to its mesentery), connecting it at one end to the stomach and the other to the skin. This was an attempt to use an isolated loop of intestine deprived of its mesentery to connect the stomach to the skin. It obviated immobilization of the stomach. In

1910—F. Lofaro[28] attempted to perfect a gastrostomy to prevent leakage, while in

1913—H. H. Janeway[29], an American surgeon, not knowing of the work of Depage, independently evolved practically the same technic; thus while Depage graciously acknowledged Janeway's work, priority belongs to Depage. In

1916—M. R. Bookman[30], writing on an "improved gastrostomy," pointed out that if the purse-string sutures are placed about the tube, Lambert fashion, in a Stamm-Kader gastrostomy, and inserted in an eccentric manner instead of concentric, the cone-like nipple in the interior of the stomach would be produced in addition to the long channel in the upper direction as in a Witzel. The cone within the stomach thus placed parallel to the anterior wall would act as a valve to prevent regurgitation of food through the new gastric fistula. In

1926—E. Crone-Munzebrock[31] improved the Witzel technic. He inserted a rather thick catheter instead of Witzel's thin rubber tube and in a more secure way fixed it to the abdominal wall; it preserves the oblique position of the tube, often lost in the Witzel. In

1927—G. Hauch[32] described a technic used by Harath in which the canal or tube is lined with pithelium to prevent the tendency to spontaneous closure. In

1929—Julius Spivack[33] combined the principles of Depage and Janeway of forming a tube and the principles worked out by Pelliere, Penières and Fontan to form a valve resulting in a tubovalvular gastrostomy, the steps of which have been described elsewhere. In

1931—I[34] modified Spivack's procedure by using the falciform ligament to reinforce the point of possible leakage at the point of junction between the tube and the stomach. In this thought I was preceded by R. W. McNealy, who reinforced that point by omentum as a means of protection from leakage. In

1932—I[35] devised a method of forming a longer tube from the posterior wall of the stomach in contracted stomachs, and a sound over which to suture the tube in order to avoid torsion of the tube[36 and 37].

SUMMARY

Gastrostomy is an important established surgical procedure, whose indications are manifold. Credit for evolution of the operation has been pointed out. Julius Spivak borrowed the ideas of the pioneer work of Depage and Janeway (tube formation) and those of Pelliere, Penières and Fontan (valve formation) and called it tubo-valvular gastrostomy.

For practical purposes tubo-valvular gastrostomy should be resorted to only by experienced surgeons who are thoroughly acquainted with the advantages, the technic and the possible dangers of the operation. Surgeons of ordinary experience will serve the interest of the patient better by resorting to the simp[illegible] methods of gastr[illegible] now pr[illegible]

SUMARIO

En los últimos veinte años ha tenido cada vez mayor aplicación la gastrostomía. La principal objeción que se hace a las diversas gastrostomías que se ejecutan hoy día, es la irritación y la excoriación de la piel que alrededor del orificio externo ocasiona el jugo gástrico que escurre. En 1896, M. Pelier (Toulouse) formó en animales de experimentación unas a manera de válvulas con la membrana mucosa del estómago, y en el mismo año, Fontan (Toulouse) logró formar una válvula con todo el espesor del estómago, y comprobó que impedía efectivamente el escurrimiento de jugo gástrico. Depage (1901) y Janeway (1913), de manera independiente, idearon la formación, de un tubo formado con todo el espesor de la pared gástrica, con lo cual se hizo un conducto revestido de membrana mucosa, lo que impedía su obliteración. Algunos cirujanos se atuvieron tan sólo al principio de Fontan, y otros emplearon el tubo de Depage-Janeway, y sus diversas modificaciones. El primero que empleó un principio combinado fué Watsudji, en 1899, quien combinó el método de von Hacker y el de Fontan, con buenos resultados. La combinación del tubo de Depage-Janeway con la válvula de Fontan, funciona de manera excelente y evita todo escurrimiento.

un chirurgien qui connaît les avantages, la technique et les périls de l'opération. Dans les mains de chirurgiens d'expérience moins variée, il est préférable d'avoir recours aux différentes méthodes de gastrostomie d'usage plus répandu et de technique beaucoup plus simple.

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Conducta Quirúrgica en la Operación de la Catarata*

(Surgical Procedure in the Operation of Cataract)

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SUMMARY

Modern operative tenchnic in cataract demands control of the wound in order that the surgeon is enabled to close or enlarge it instantly, whenever necessary. According to the author, the most efficacious way to obtain this control, is the application of two corneoscleral sutures combined with a conjunctival bridge. The advantages are that by opening or closing a suture the wound is enlarged or limited and the bridge prevents the abrupt emergence of the cataract. The escape of vitreous material is thereby frustrated.

LA operación de la catarata senil muy pronto va a cumplir su segundo centenario desde que Daviel la dió a conocer en Francia el año de 1745, de donde más tarde se difundió por el mundo entero. Desde entonces se viene escribiendo constantemente sobre este tema tan antiguo al mismo tiempo de constante actualidad.

En casi todos los trabajos relacionados con la operación de la catarata se refleja el criterio y la experiencia personal del autor, adoptando tal o cual sistema de operar, tal o cual modificación a las técnicas clásicas, o dando alguna sugestión para evitar los peligros de esta delicada operación. En verdad no se puede decir de una manera general que este u otro procedimiento sea bueno o malo, ni mejor o peor, ni más fácil ni más difícil, ni más seguro ni más peligroso, porque el procedimiento que en manos de un cirujano tiene determinadas cualidades no las tiene en las de otro. Sin embargo todos estos procedimientos son susceptibles de proporcionar resultados satisfactorios a sus creadores, y son tantos los publicados que no sería exagerado decir que cada operador tiene su técnica y que cada uno encontrará determinadas ventajas de su procedimiento sobre tal o cual otro ejecutado por los demás.

Ante esta inmensa variedad de técnicas cabe orientar al cirujano que aún no tiene su criterio formado, ni su método personal, de manera que no llegue a incurrir en faltas graves de técnica operatoria y en rutinas que deben desecharse. Indudablemente que este importantísimo tema es digno de ser desarrollado en un tratado formal, y al efecto existen varias monografías importantes sobre el particular. Este trabajo, como casi todos los de su índole tratará de reflejar mi sentir personal y los dictados de mi experiencia, deseando contribuir con un pequeño grano de arena en la tarea común a todos los oculistas del día que anhelan operar una catarata con la máxima seguridad y con el mejor resultado operatorio.

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Hace cerca de 200 años la operación de la catarata se ejecutaba sin anestesia, sin asepsia, con instrumental deficiente y con el enfermo sentado. La intervención era rápida y el operador hacía lujo de precisión y habilidad. El porcentaje de ojos perdidos era muy elevado, lo cual provocó una reacción intensa contra la intervención, y hubiera quedado relegada al olvido si no hubieran venido en su auxilio el perfeccionamiento de la técnica, la anestesia y la asepsia, que lograron rehabilitarla y mejorarla hasta la portentosa perfección que tiene en la actualidad.

En los comienzos del siglo en que vivimos la operación de la catarata proporcionaba ya excelentes resultados, sin ser todavía una operación perfecta, por lo cual estaba expuesta a un gran número de accidentes acaecidos durante el acto eratorio y a complicaciones posteratorias, todo lo cual culminaba en unerosos fracasos. Pero el deseo de evitarlos ha motivado un trabajo intenso de perfeccionamiento encaminado a mejorar la técnica operatoria, o preparando el organismo habitualmente tarado y decadente de los pacientes. Con esto se ha logrado que los fracasos hayan disminuído de una manera apreciable y que los resultados post-operatorios sean cada vez más perfectos.

Siendo las cataratas un padecimiento de evolución muy prolongada, invalidan al paciente por meses y por años, impidiéndole continuar en su trabajo. Por otra parte es necesario que el individuo que ha estado incapacitado por motivo de sus cataratas recupere su visión, si es posible con un ciento por ciento de su aptitud. para retornar a sus actividades anteriores. Curación rápida y perfecta, son dos exigencias que el modo de vivir actual ha arrojado sobre el cirujano oculista una grave responsabilidad. Afortunadamente el problema que entraña estas exigencias ha tenido una solución posible mediante tres preceptos que considero fundamentales:

1. Valerse de todos recursos de la medicina moderna para preparar convenientemente al paciente, lo cual le permitirá alejar todas las complicaciones que pudieran ser debidas a su mal estado general.
2. Perfeccionamiento de la técnica operatoria y del instrumental para eliminar los accidentes durante la intervención, los que vienen después de ella, y para obtener el máximo de recuperación funcional.
3. Emplear procedimientos capaces de extraer una catarata incipiente, pero excentos de todo peligro para el paciente.

Además de estos preceptos fundamentales hay otros perfeccionamientos secundarios, que en ciertos casos pueden ser tanto o más importantes que los primeros. Deberán considerarse entre ellos los diversos modelos de blefaróstatos y retractores palpebrales que evitan la presión de los párpados en el globo ocular, la inyección retrobulbar que abate la tensión del ojo y de dá cierto grado de inmovilidad, el bloqueo de los músculos rectos, la sutura del músculo recto superior para dar fijeza al globo ocular, la conservación de un puente conjuntival, etc.

No hace muchos años se decía que un buen número de pacientes con catarata eran inoperables. Se trataba de diabéticos, cardíacos, hipertensos, asmáticos, enfisematosos, sifilíticos, portadores de alguna infección focal, etc., etc.; pero en la actualidad esta larga lista se ha ido reduciendo cada vez más gracias a los progresos de un tratamiento médico pre-operatorio y aún post-operatorio bien dirigido.

Además, gracias a estos cuidados pre-operatorios es posible mejorar la evolución post-operatoria en los casos de catarata senil no complicada de un mal estado general.

Con relación al perfeccionamiento de la técnica operatoria se destacan dos mejoras importantes que han sido aceptadas universalmente en estos últimos años y son la aquinesia palpebral y la sutura de la herida operatoria.

La aquinesia suprime el peligro de la pérdida del contenido del ojo por la presión brusca de los párpados y hace al cirujano dueño del campo operatorio, sin que la voluntad y quietud del enfermo sea un factor indispensable para la operación y sin que la inquietud, la inconciencia, o su torpeza sean motivos de la pérdida de un ojo.

La sutura de la herida operatoria es uno de los complementos más importantes que le han venido a dar a la operación de la catarata el perfeccionamiento que hoy tiene.

Es verdaderamente asombroso, casi increíble, cómo en 150 años de haber entrado en la práctica quirúrgica esta operación se pudo practicar sin la sutura de la herida, máxime que las mismas razones que existen para cerrar el vientre, el cráneo, o cualquiera otra cavidad aséptica después de una intervención, existen para cerrar la cámara anterior.

La pretendida coaptación del colgajo conjuntival sin sutura es tan sólo aparente a la simple vista; si es observada con una lupa se verá que dicho colgajo por su elasticidad propia se retrae provocando una dehisencia de la herida operatoria suficiente para dar salida al iris y demás contenido del ojo, así como para permitir la entrada de líquidos capaces de provocar una infección endoocular.

Indudablemente que la creencia errónea de la perfecta coaptación del colgajo corneo-conjuntival y la imposibilidad de hacer la sutura de la herida operatoria como tiempo final de toda operación, hicieron que por todo ese período de tiempo se operara la catarata dejando abierta la cámara anterior.

El año de 1891 el oculista español Suarez de Mendoza concibió la idea de hacer la sutura de la herida antes de la incisión. Desde entonces hasta nuestros días la sutura de la herida operatoria en la catarata se ha venido practicando cada vez más y ha sido objeto de numerosas modificaciones y perfecciones.

En la actualidad es posible obtener un resultado funcional muy perfecto y se puede evitar la invalidez prolongada del paciente extrayendo la catarata antes de su maduración gracías al perfeccionamiento que ha alcanzado la extracción total o intracapsular de la catarata. No hace 20 años todavía se discutían las ventajas de la extracción total sobre la extracción con capsulotomía. La extracción total contaba entonces con muy pocos partidarios, en cambio la extracción extracapsular era más usada y se invocaba en su favor la sencillez, la seguridad, la rareza de las pérdidas de vítreo y la posibilidad de obtener una visión, si no habitualmente perfecta, sí lo suficiente para que el enfermo volviera a sus actividades; pero el método cuenta con un elevado porcentaje de complicaciones post-operatorias y de resultados muy deficientes.

La extracción total además de las ventajas señaladas ha contado en su favor con un resultado óptico mejor, una secuela post-operatoria mejor y casi excenta de complicaciones de causa inflamatoria.

En la época actual ya no se discute si la extracción extracapsular es superior a la intracapsular, por que los procedimientos de extracción total son cada vez mas fáciles, más seguros y más excentos de accidentes y complicaciones. El resultado de este perfeccionamiento es que la extracción total cada [illegible] pr[illegible] cada vez más y que en [illegible] c[illegible] oftalmológicos la ext[illegible] sular se haga por una verdadera excepción.

Soy un partidario absoluto de la extracción total, después de haber practicado por muchos años la extracción extracapsular. Los métodos que prefiero son en primer lugar la facoeresis, después la extracción con la pinza y en último lugar el método de Smith. A pesar de esta predilección por la extracción total no condeno en absoluto la extracción extracapsular que considero preferentemente indicada:

A. En ojos hipertensos, en los que después de haber hecho la incisión, el iris y el cristalino son proyectados hacia la cámara anterior—como si fueran a salir.

B. En los casos de cataratas complicadas con marcada hipotonía ocular como son los ojos con antecedentes de miopía alta y fluídez exagerada del vítreo.

C. En los casos de cataratas flúidas, los que basta evacuar el líquido que na la bolsa capsular por una pequeña ncisión, por la cual después es fácil extraer la membrana capsular.

D. Finalmente es de recomendarse como un método de iniciación para los cirujanos poco experimentados o de escasa habilidad.

Es importante tener presente que el hecho adoptar la extracción extracapsular ya sea como excepción, o como un método de elección por ser menos peligroso no descarga al cirujano de la obligación de rodearse de todas las precauciones y de todos los recursos indispensables que sean de rigor en la operación de la catarata como se hace en la actualidad.

Otra condición indispensable en este método es no operar sino las cataratas completamente maduras y las hipermaduras: pero por ningún motivo una catarata antes de su maturación.

En los procedimientos antiguos de extracción de la catarata cuando el cirujano abría la cámara anterior no sabía lo que iba a suceder después. De la misma manera que la operación podría haber sido correcta, con una buena secuela post-operatoria y con un buen resultado funcional, se podría haber presentado algún accidente operatorio, como la pérdida de vítreo o la luxación de la catarata, o que habiendo salido la operación correcta se presentara días después alguna complicación, como la hernia del iris, la infección de la herida operatoria y las complicaciones derivadas de ella, o sea el retardo de la cicatrización, el esfacele de colgajo córneo-conjuntival, o una infección endo-ocular.

Todos estos accidentes y complicaciones en la actualidad se han suprimido casi por competo mediante el control que el cirujano ejerce sobre la herida operatoria. Este control no solo le permitirá mantener bien coaptados los labios de la herida al terminar la operación, como se hace en qualquiera intervención de cirugía general. El control de la herida operatoria en la extracción de la catarata debe permitir ampliarla, reducirla, o cerrarla definitivamente y todas estas maniobras hechas instantáneamente, y con absoluta precisión. Este control es el que conjura el accidente más grave y más temido de esta cirugía, cual es la pérdida del vítreo, y después de terminada la operación el que evita las complicaciones ulteriores.

Mucho antes de que hiciera la extracción total había comprendido la necesidad de tener este control, el cual hacía mediante un amplio puente conjuntival. Con dicha técnica limitaba de una manera aceptable las pérdidas de vítreo y permitía una mejor coaptación de los labios de la herida, debido a que la retracción del puente contrarrestaba a la del colgajo corneal que se hacía en sentido contrario. Además pude observar que la cicatrización de la herida era más rápida y excenta de infecciones. La seguridad que me proporcionaba el puente era tan satisfactoria que durante un largo período de tiempo me permitió hacer con éxito las primeras extracciones totales. Para esto antes de hacer el arrancamiento capsular con la pinza de dientes intentaba la extracción total. Muchas veces lo conseguía sin tener ningún incidente que lamentar, pero otras tuve alguna pérdida de vítreo de poca consideración.

Cuando abandoné la técnica de extracción extracapsular adoptando la extracción total con la pinza con el crisífaco comencé a practicar una sutura corneoescleral mediana y me ví precisado a abandonar el puente conjuntival. Entonces pude observar lo siguiente:

1. Que una sóla sutura daba menos control que el puente durante el acto operatorio.
2. Que una sola sutura coaptaba los labios de la herida menos bien que el puente y daba ocasión a complicaciones post-operatorias.
3. Que la falta del puente retrasaba la cicatrización de la herida y la exponía a su infección.

Si no hubiera sido por el convencimiento pleno de que los resultados operatorios obtenidos por la extracción total eran superiores a la extracción extracapsular hubiera vuelto a mi técnica anterior que me tenía tan satisfecho.

Tuve entonces la idea de conservar el puente y reforzar al mismo tiempo la sutura para lo cual idié aplicar dos suturas córneo-esclerales distantes entre sí unos 4 milímetros para tallar entre ellas el puente. Desde que pude realizar esta idea me hice más dueño que antes del control de la herida operatoria, por que no sólo me ha permitido conservar las ventajas del puente conjuntival, sino que mediante las suturas tuve la posibilidad de cerrar a voluntad la herida operatoria y obtener después una oclusión hermética.

Después de esto me he convencido que en la técnica moderna de extracción de la catarata no basta aconsejar la sutura, sino que es necesario aconsejar una sutura que permita un control efectivo de la herida operatoria. También estoy convencido que a partir del momento en que el enfermo ha llegado convenientemente preparado a la mesa de operaciones el éxito de la intervención depende casi exclusivamente del citado control.

La sutura que vengo usando desde hace varios años permite este control absoluto por lo cual a continuación la describiré como final de esta comunicación.

TÉCNICA OPERATORIA

Se usan dos hilos de seda negra y fina, ensartados cada uno con dos agujas de sutura corneal y se hacen dos suturas corneoesclerales de Liegard, de manera que una quede situada entre las 10 y las 11 y la otra entre la 1 y las 2 del cuadrante horario imaginado en el limbo esclero-corneal. Como detalles importantes de la maniobra deben tenerse en cuenta los siguientes.

Pasar le punta de las agujas de adajo hacia arriba tanto en la córnea como en la esclera; no tomar capas muy profundas, ni menos atravesar ninguna de estas membranas; hacer cada puntada no menor de tres milímetros de ancho lo cual les da firmeza favorece una oclusión más perfecta.

Puestas las suturas se hace en el hilo que penetra a la córnea un nudo como en la sutura de Gomez Marquez, lo cual permite una aproximación segura de los labios de la herida con sólo tirar del hilo de la sutura escleral (Fig. 1).

En seguida se disponen los hilos en forma conveniente para no ser divididos al practicar la incisión, según lo indica la figura 2 que es más clara que cualquiera descripción (Fig. 2).

Al hacer la incisión corneal, que terminará por un puente conjuntival lo más

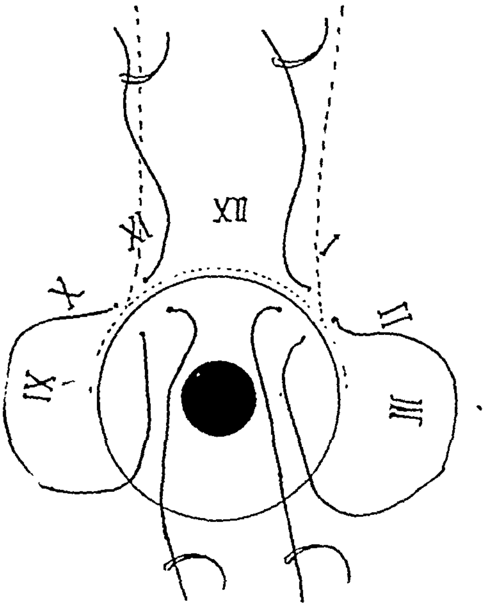

Fig. 1. Suturas corneo-esclerales de Liegard.

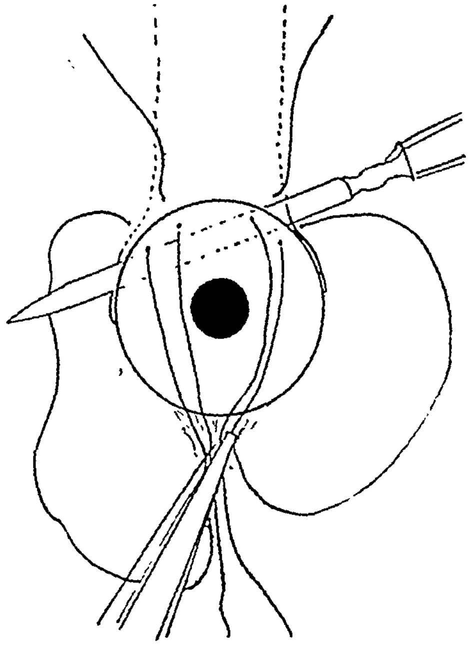

Fig. 2. Incisión corneal.

cho posible, se cuidará de no dividir las asas de los hilos; pero si al tallar el puente se interpone en el cuchillo alguno de los cabos de los hilos que salen después de haber atravesado la esclera no tendrá importancia la sección de ellos, por que siempre quedará una pequeña de 2 ó 3 milímetros, tamaño suficiente para ser tomada con la pinza, y poder jalar la cantidad necesaria para anudarlo después con el otro cabo (Fig. 3).

El puente conjuntival después será desbridado con tijeras hacia la parte alta, a fin de tener un espacio suficientemente amplio para terminar las maniobras operatorias. Igualmente si hay algunas bridas que limiten el acceso a la cámara anterior, serán cuidadosamente divididas. Hecho lo anterior, se preparan las suturas para ser anudadas en el momento deseado (Fig. 4).

Practico las más de las veces una iridectomía pequeña y periférica, según la técnica de Hess, maniobrando debajo del puente conjuntival, o haciendo un pequeño ojal en su parte media adherente

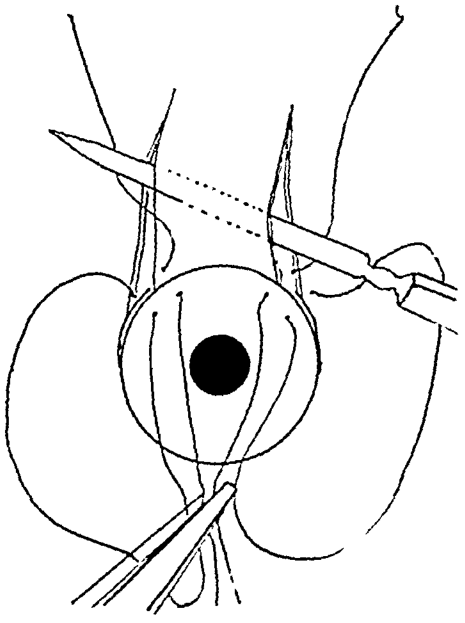

Fig. 3. Incisión corneal.

al limbo. Después vienen los tiempos de la extracción de la catarata que hago en la actualidad por medio del erisífaco sin

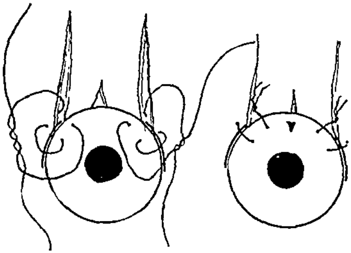

Fig. 4. Muestra el puente conjunctival.

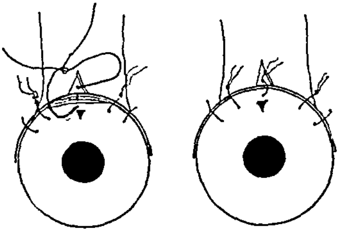

Fig. 6. Cierro de la herida.

válvulas de mi modelo personal, o bien con alguna pinza capsular modelo de Arruga, de Kalt o de Elsching.

Durante las maniobras de extracción el ayudante toma con una pinza uno de hilos esclerales y el operador toma el otro con una pinza de Elschig o un Utility forceps de Nuggent, a cierta distancia de la salida escleral, de manera que, sin soltar el hilo, permita al mismo tiempo ayudar a las maniobras de expulsión, y en un momento dado poder jalar el hilo para cerrar la herida operatoria a voluntad.

Apenas la catarata haya pasado debajo del puente conjuntival el ayudante y el operador tiran simúltaneamente los hilos esclerales cuya maniobra cierra desde ese momento la herida. Se anudan en seguida las suturas y se termina la operación por la reposición del iris (Fig. 5).

Para hacer con precisión los diversos tiempos operatorios uso una telelupa de Beebe que me permite apreciar multitud de finos detalles invisibles a simple vista. De esta manera me cercioro de la exacta coaptación de los bordes de la herida, de la exacta formación de la cámara anterior etc., etc. Uno de los detalles últimos es cerciorarse de que no haya quedado una pequeña dehisencia de la herida, debajo del puente, entre ambas suturas y para cerrarla hago en él un pequeño ojal y aplico un punto corneoescleral tomando los bordes de la incisión (Figs. 7 y 8).

Si durante las maniobras de extracción el vítreo ha comenzado a salir antes de que la catarata haya franqueado el limbo esclerocorneal el ayudante tirará de el hilo que tiene sujeto, con lo cual cerrará en parte la herida operatoria. El operador al mismo tiempo desviará la catarata para que ésta, detenida por el puente, detenga a su vez al vítreo haciendo las veces de tapón. Tan pronto como el ecuador de la catarata haya pasado del limbo el operador tirara de su hilo con lo cual la herida se habrá cerrado, la pérdida de vítreo será mínima y a veces se dará el caso de que el vítreo que asomaba para salir, en vez de perderse, entre a la cavidad ocular (Figs. 8 y 9).

Cuando el vítreo se presenta durante la extracción es frecuente que el operador y el ayudante apliquen sobre el colgajo corneal una espátula o una cucharilla para abatirlo tratando de cerrar la herida. Esta es una ni [illegible] nala, y [illegible] si se hace co [illegible] a

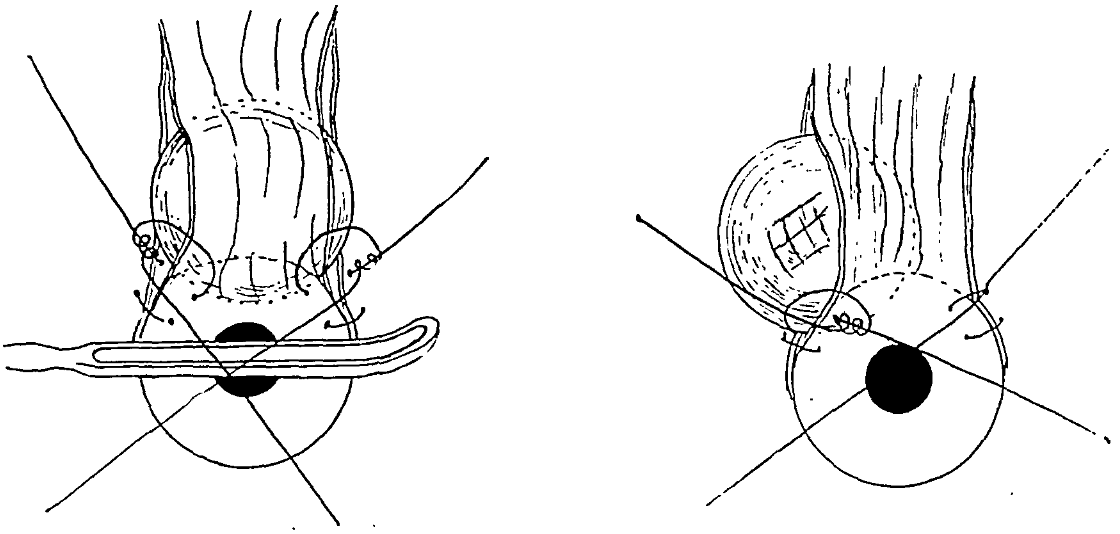

Fig. 7. Como cerrar la herida por tracción de los hilos.

Debe tenerse en cuenta un principio elemental de hidrostática, mediante el cual la presión imprimida a las paredes del lobo ocular se transmite a su contenido úido, en consecuencia toda presión ejercida sobre la córnea no hace sino aumentar la pérdida del vitreo, de la misma manera que lo aumentaría presión de los párpados ejercida a través de la esclerótica. La venaja de cerrar la herida por tracción de los hilos no sólo evita esta presión fatal sobre las paredes del globo, sino que hace cierto vacío y por eso es posible que el vítreo que comenzaba a salir vuelva nuevamente a entrar.

En las cataratas luxadas al vítreo y en aquellos casos que al terminar la incisión éreo ha comenzado a salir, no se hará ninguna tentativa de extracción con la pinza, ni menos se hará presión alguna para empujar la catarata. En estos casos la única maniobra eficaz es introducir dentro del cristalino el asa de Taylor y extraer el cristalino. Aún en estos casos el puente y la doble sutura permite hacer un perfecto control de la herida operatoria y evitar una pérdida de vítreo de consideración.

La técnica que acabo de presentar permite hacer con toda facilidad y seguridad la extracción total de la catarata no importa cual sea el procedimiento que use; pués aún con él de Smith que es más propenso a las pérdidas de vítreo el control de la hérida operatoria se ejerce con toda facilidad.

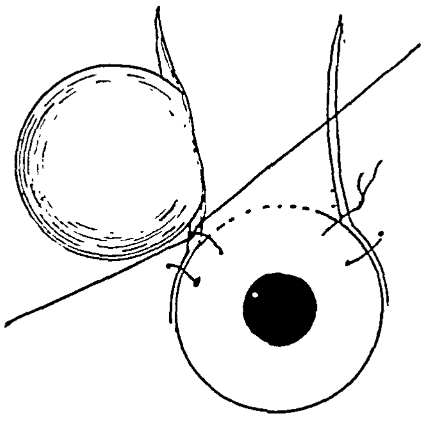

Fig. 8. La herida cerrada.

De la misma manera me has permitido hacer la extracción de cataratas luxadas al vítreo y también la extracción de las

cataratas luxadas o subluxadas a la cámara anterior complicadas de glaucoma inflamatorio agudo y cuyo tratamiento es ir directamente a suprimir la causa determinante de este accidente.

Finalmente debo manifestar que la técnica que acabo de presentar aparentemente complicada y difícil en realidad no lo es y que aún en el caso de que dichas maniobras significaran un poco más de tiempo gastado y algunas maniobras operatorias más bien valen la pena de emplearlas en vista de la mayor seguridad y tranquilidad que le dan al operador.

SUMARIO

La técnica moderna en la catarata demanda control de la incisión de moda de poder cerrarla o agrandarla inmediatamente cuando fuere necesario. Según el autor la mejor manera de obtener este control es la aplicación de dos suturas corneaesclerales combinadas a un puente de conjuntiva, que dan la ventaja de poder apetar o aplojar estas suturas, prevenir la salida brusca de la catarata; así como podrá detener la salida del vitreo.

RÉSUMÉ

La technique opératoire moderne pour la cataracte demande le contrôle de la plaie afin que le chirurgien puisse fermer ou étendre cette plaie quand cela est nécessaire. D'après l'auteur le moyen le plus efficace d'obtenir ce contrôle est l'application de deux sutures corneo-sclérales avec un pont conjunctival. Par la fermeture ou l'ouverture des sutures, la plaie peut être élargie ou retrécie et le pont ne permet pas l'échappement subit de la cataracte. L'émergence de la matière vitreuse est ainsi empêchée.

Tumor Formation in the Mineral, Vegetable, and Animal Kingdoms*

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PEARLS in oysters are formed by the insertion of an irritating substance. Certain excrescences found on trees and plants are due to irritation from insect punctures. Many of these are close to human malignancy. Growths are found in beet, cauliflower, olive, the cabbage family, etc. The histologic types of malignant new-growths found in man are recognized in domestic and wild animals. Tumors have been found in wild birds and birds of prey, in lizards, boa constrictors, frogs, and in fish living under artificial as well as natural conditions. New-growths are not exempted from any region of the earth. From the glacial regions to the torrid heat of the tropics there is cancer and tumor incidence. The savages in the jungles of Africa, the semi-civilized natives in the Orient, join the highly civilized Occidentals in susceptibility to new-growths.

Great advance has been made in the field of diagnosis of tumors and cancers, particularly in the knowledge of the multiplex pathology of cancer. It was not until the seventeenth century that leprosy, tuberculosis, and elephantiasis were differentiated from the all-inclusive term of cancer. In the eighteenth century, vener [illegible] sca [illegible] ranulo and actinomy [illegible] o [illegible] nineteenth c the others. The natural questions arise: What diseases are still incorporated in that which we call cancer today? Is the fact of its present multiplexity the reason why one form of treatment seems to benefit certain cases and to have no effect on others? Are the different pathologic types *really different diseases?* Our army of research workers over the world in the cancer field may one day answer these questions and thus benefit mankind.

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* Abstract of paper with slides presented at the Third International Assembly of the International College of Surgeons held in Mexico City, August, 1941.

Many practical and valuable lessons are stressed from this study as a background, and useful and useable points in diagnosis and treatment clearly set forth.

SUMMARY

Many growths found in vegetable and imal life are recognized in man. The thor states that new-growths are not empted from any region of the earth. In the seventeenth century leprosy, tuberculosis and elephantiasis were differentiated from cancer, as were other diseases in centuries to follow, until today great advance has been made in its knowledge and multiplex pathology.

SUMARIO

Vistas fijas de diversas formaciones de neoplasmas en rocas, plantas, animales y en el hombre. Las perlas se forman en las ostras mediante la inserción de una substancia irritante. Ciertas excrecencias de las plantas son causadas por la irritación del insecto, y muchas de ellas se asemejan a los neoplasmas malignos del hombre. Las variedades microscópicas de neoplasmas malignos que se hallan en el hombre, se reconocen en animales domésticos y salvajes. Los neoplasmas se hallan en todas las regiones del Globo, desde las regiones glaciales hasta las zonas tórridas, entre los salvajes del Africa y las razas occidentales sumamente civilizadas.

Se han alcanzado muchos progresos en el diagnóstico de los neoplasmas, entre otros, del carcinoma, sobre todo en lo que atañe a su patología múltiple. Fué hasta el siglo XVII cuando la lepra, la tuberculosis y la elefantíasis quedaron separadas del término "cáncer." En el siglo XVIII se diferenciaron también la enfermedad venérea, el granuloma y la actinomicosis, y en el siglo XIX la blastomicosis. Los investigadores que en todo el mundo trabajan acerca de la neoplasia maligna, responderán algún día las preguntas de cuáles son las enfermedades que pertenecen a lo que hoy día llamamos "cáncer"; el por qué algunos tratamientos benefician a ciertos pacientes y no a otros, y si las diversas variedades patológicas son en verdad distintos padecimientos.

RÉSUMÉ

Beaucoup de néoplasmes qu'on rencontre dans le règne végétal et chez les animaux se rencontrent aussi chez les humains. Nulle région du globe n'est exempte de néoplasmes. Au dixseptième siècle, on différencía la lèpre, la tuberculose et l'éléphantiase du cancer. Dans les siècles suivants, d'autres maladies *furent différencieés. On a fait de grands* progrès dans nos connaissances du cancer et dans l'interprétation de sa multiplexe pathologie.

The Management of Abdominal Injuries in Warfare*

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SUCCESS in the management of abdominal injuries of total warfare depends chiefly upon prompt collection, assortment and transportation of the injured, a short but intensive preoperative régime, good team work, and skillful surgery supplemented by prolonged after-care on the spot. The time factor, i.e., the time which elapses between the receipt of injury and the operative undertaking, is most important, as has been shown by all statistics compiled during this present war. For instance, some of the mobile surgical units with the Eighth Army, operating close to the front line, have been able to save 75 per cent of their cases of penetrating wounds of the abdomen. During the aerial bombardments of this country the all-round death rate from abdominal trauma was about 50 per cent, whereas after the Dieppe affair, owing to the time lag which resulted from difficulties in transportation, only about one-quarter of the soldiers who had penetrating or perforating wounds of the abdominal viscera which demanded surgical interference could be saved, even by expert surgery in well-appointed base hospitals.

The general principles governing the management of war wounds of the abdomen are in many respects similar to those employed in surgery of abdominal trauma in peace time. The differences are due to the degree, extent and nature of the injuries themselves, and to the fact that in war it is very often unwise to reduce principles, however sound, to precise rules.

From the wealth of statistical evidence now available it is generally agreed that abdominal cases demanding operative interference are very rare; that the number of immediate deaths due to abdominal visceral damage does not amount to more than 10 per cent of the total killed (Gordon-Taylor); that in over 20 per cent of abdominal injuries the entrance wound is situated in the buttock or thigh; that abdomino-thoracic lesions constitute approximately 13 per cent of the cases of abdominal trauma in this war; that operation within six hours of the receipt of the injury is the ideal to be aimed at; that it is important to regard every patient presenting abdominal symptoms as a case of abdominal trauma until it has been conclusively proved to be otherwise; that it is essential to consider every person who has sustained a wound of the abdominal cavity as *certain* to die unless subjected to an exploratory operation, and as *likely* to die unless operated on early; that shock, although frequently marked, may be absent or tardy in appearance; and that the predominant causes of death are hemorrhage and peritonitis, the former claiming the fatalities.

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* Presented at the Fourth International Assembly of the International College of Surgeons, New York, June, 1943.

Injury to the abdominal viscera may result in: (1) a penetrating or perforating wound; (2) a contusion, laceration or rupture of a solid or hollow organ without any evidence of external injury, e.g., blast injuries of the abdomen; (3) a contusion or subcutaneous rupture of the abdominal wall; (4) a laceration or puncture of one or more layers of the abdominal wall in which, however, the peritoneal lining remains intact; and (5) a combination of any of the above four lesions.

Clinically, abdominal trauma may be classified into three groups: (1) cases in which the diagnosis is doubtful and the indications for or against operation are not clear; (2) cases which obviously require immediate operation following a rief but purposeful course of preoper-.tive treatment; and (3) cases of severe multiple injuries which stamp the case as hopeless from the start.

GROUP I—DOUBTFUL CASES

The cases which present the greatest difficulty in diagnosis may be grouped as follows: (1) abdominal contusions; (2) blast injuries; (3) thoracic injuries; (4) lesions of the spinal column associated with abdominal symptoms; (5) penetrating or perforating wounds which involve only the abdominal parietes; (6) the single minute wound, remote from the abdomen, associated with obscure yet persistent abdominal symptoms; (7) extensive retroperitoneal hemorrhage or injury about the kidney or adrenal gland; and (8) acute dilatation of the stomach.

The *diagnosis* is made by taking a careful history, by carrying out a complete and methodical physical examination of the patient—every part of every patient—and by a consideration of the clinical picture as a whole. No one sign or symptom is pathognomonic of abdominal damage. The doubtful cases should be kept under close observation for a few hours, during which time a twenty-minute record is kept of the temperature, the pulse rate, the respiration rate and the blood pressure. Immediate examination of the blood and of the urine should be undertaken. Blood in the urine indicates damage to the kidney, bladder or urethra. "If hemorrhage is suspected, estimation of the blood specific gravity by the falling-drop method of Barbour and Hamilton can be rapidly made, the concentration of blood plasma protein quickly determined, and prompt information obtained concerning the extent of blood loss. The estimation of blood concentration, if desired, can be checked by hematocrit determination; indications for types and amount of intravenous therapy may thus be obtained" (Estes). In practice, however, the routine methods usually employed for the investigation of the blood suffice for these emergency cases.

Straight x-ray films of the abdomen taken with the patient lying prone and sitting upright may yield valuable information in cases of suspected intestinal rupture and also in determining the size and approximate position of any retained foreign bodies. The presence of a crescent or sickle-shaped accumulation of gas between the convex surface of the liver and the diaphragm is frequently observed with perforations of the stomach, the colon and the small gut. Its absence, however, does not by any means rule out the possibility of rupture of some part of the gastro-intestinal canal.

Auscultation of the abdomen should be carried out in all cases and will often prove of considerable diagnostic assistance, particularly when combined with radiologic methods. A silent abdomen may denote the presence of paralytic ileus, and in war wounds of the abdomen the most frequent cause of this complication is spreading or diffuse peritonitis.

Severe persistent localized or generalized abdominal pain, the transition of a localized pain to a spreading or diffuse pain, a steadily increasing pulse rate, incessant vomiting or retching, and a circumscribed or diffuse tenderness associated with board-like guarding of the abdominal muscles, with or without evidence of increasing hemorrhage or infection, form a combination which demands immediate exploratory laparotomy.

With *contusions of the abdominal wall*, shock, localized tenderness and guarding are frequently present, but shock speedily decreases with rest, warmth and plasma infusions, while the tenderness and guarding diminish or, at the worst, remain stationary for a time.

Visceral damage should be suspected if the pain becomes more severe in character or if there is a definite extension of the area of tenderness and rigidity which was formerly present. For instance, in a patient who has sustained an injury of the epigastrium, if muscular spasm and tenderness are found some hours later in the right iliac fossa and on rectal examination the pelvic peritoneum proves to be exquisitely tender, these findings alone would suggest the probability of a laceration of one of the hollow viscera.

Blast injuries of the abdomen are of two clinical types: (a) mild; and (b) severe. In the *mild* cases the temperature is slightly raised, the pulse is usually about 100, and the slowly distending abdomen is painful, the muscles being on guard. The clinical picture, therefore, is that of a mild chemical or bacterial peritonitis. The *severe* cases, on the other hand, are indistinguishable from those of a fulminating generalized peritonitis, the pulse being rapid and thready, the temperature high or subnormal, the blood pressure low and shock profound, while on abdominal examination there is a marked degree of tenderness and board-like rigidity of the muscles. In the latter cases the intestines are in fact frequently ruptured and the solid organs are often severely bruised, lacerated or pulped; in the mild cases, however, all that is found as a rule on abdominal exploration are small multiple subperitoneal hemorrhages scattered throughout the parietal and visceral peritoneum.

The decision for or against operation in these blast injuries of the abdomen is always extremely difficult, but for cases which show no response after a short trial of the best resuscitation measures it is better to subject them to an exploratory operation than to temporize indefinitely.

It is surprising how often *thoracic injuries* are associated with abdominal pain, rigidity and distension and how in some crushing injuries of the chest the abdominal symptoms may be more marked than those arising in the thorax.

Acute dilatation of the stomach, too, is a fairly common accompaniment of thoracic injuries. Ogilvie rightly points out that the decision as to whether a penetrating wound is abdomino-thoracic or purely thoracic is important, for in the first case operation is urgently necessary, whereas in the second it can be, and sometimes should be, postponed. He states that in purely thoracic wounds the rigidity is strictly unilateral, whereas in abdominal wounds it is total or else limited to certain peritoneal compartments rather than to one side, and that the rigidity is variable, often lessening as the patient's attention is distracted, and tending rather to disappear than to increase.

Injuries of the spinal cord may cause referred abdominal pain and even guarding of the abdominal musc[illegible] If the [illegible] the a[illegible] tient is in a state [illegible] dominal sym[illegible] signs of [illegible]

The small intestine should be examined in its whole length from the ileocecal valve to the duodeno-jejunal flexure. A few inches are withdrawn and inspected, and if found to be normal, are replaced. If a perforation is discovered, its edges are clipped with a small hemostat and that portion of the gut is wrapped in a warm abdominal pad and this method is followed until the whole length of the jejuno-ileum has been examined. There must be one examination only and this, therefore, must be thorough, and evisceration must be limited to those portions in which rupture has been discovered and which have been marked with clips and pads. The following organs are then examined by touch and vision in this order: the stomach, the duodenum, the pancreas, the spleen, the liver, the gall bladder, the colon and the pelvic viscera. A careful search should be made for any retroperitoneal hematoma, especially in the region of the second and third parts of the duodenum and behind the right and left paracolic gutters. Such hematomas are often associated with injury to the kidneys, the colon or the retroperitoneal duodenum. They should be explored and the gut in the vicinity carefully scrutinized to rule out the possibility of retroperitoneal rupture of the bowel.

After identifying the various lesions of the abdominal viscera it will then be necessary to repair the damaged organs. The methods and technic for injuries of the particular viscera will be considered presently.

Any fluid which remains in the abdomen after such repair has been carried out should be removed by suction, and any holes in the gut which have been sutured or any anastomotic line should be freely sprinkled with equal parts of sulphanilamide and sulphathiazole. It is a wise precaution to leave about 5-8 gms. of this powder in the peritoneal cavity at the completion of the operation and to insufflate the compound freely into any retroperitoneal area which has been examined or which has been contaminated with intestinal contents. The sulphonamide powder is also placed between the various layers of the abdominal wall before the incision is sutured.

Drainage is called for in all cases of frank peritonitis, in retroperitoneal hematoma associated with laceration of the intestine and in most cases where there has been an excessive contamination of the peritoneal cavity with intestinal juices. The best drainage materials are oiled silk, vaseline gauze or "plastic glass." Drainage material should be left *in situ* for twenty-four hours or five days, depending upon the amount of the discharge and the gravity of the infection.

The abdominal incision is best closed with through-and-through figure-of-eight sutures of thick silk which embrace all the layers of the abdominal wall and which are placed ½-inch apart, or with a series of mattress sutures of floss silk which draw together all the layers of the abdominal wall except the skin, this being closed with interrupted vertical mattress sutures of fine silk. All the silk material which is used during the operation is soaked in 0.8 per cent sulphanilamide in physiologic saline solution. The abdominal wound is then painted with tincture of iodine, and gauze is applied, this being kept in place with broad strips of elastoplast or other adhesive, preferably impregnated with sulphanilamide powder.

After-care. Most of these cases are treated on the assumption that paralytic ileus is present. No fluids are permitted by mouth, and water balance and nourishment are maintained by the intravenous route. In each twenty-four hours about 3000 to 5000 c.c. of blood, glucose-saline or plasma, either singly or in combination, are administered by the intravenous slow-drip method according to the peculiar needs of the patient. For the first two or three postoperative days, morphine is prescribed and no attempt is made to get the bowels working with purgatives or enemata. The Ryle tube, which was inserted before the operation and which was *in situ* during the operation, remains in the stomach until aspiration shows that active peristalsis has been re-established. During the first two or three days after operation the stomach is aspirated two-hourly to keep it completely deflated and also to withdraw fluids and flatus from the duodenum and upper coils of the jejunum. No purgatives and no enemata are permitted until blatant peristaltic sounds are heard on abdominal auscultation. The bowels are then induced to act with small enemata of glycerine, paraffin or olive oil. It must be stressed that no enemata are given until it is obvious that peristalsis has been fully restored.

Pure oxygen given by the B.L.B. mask in the immediate postoperative phase is most helpful, as is also the administration of vitamins A, B and C in full dosage. The best methods of combating hypoproteinemia is by giving whole blood or plasma infusions. In all cases in which there has been contamination of the peritoneal cavity with intestinal contents it is a wise precaution to prescribe sulphathiazole for a period of three or four days after operation. Suction bronchoscopy is indicated in all cases of postoperative atelectasis.

METHODS OF DEALING WITH LESIONS OF THE INDIVIDUAL VISCERA

Small intestine. In war wounds of the abdomen the small intestine is injured in about 40 per cent of the cases, and where such injuries involve only a small portion of the jejuno-ileum, the death-rate is approximately 30 per cent. When, however, these are accompanied by other intra-abdominal lesions the mortality may be as high as 50—60 per cent. The best results are seen in those cases in which the ruptures of the small intestines are few, are suitable for repair by suture, and contamination is minimal. The perforations are usually small and multiple, and the mucous membrane at the site of the punctures pouts in an attempt to seal off the perforation and prevent, as far as possible, the discharge of intestinal contents into the peritoneal cavity. Owing to this pouting and local ileus, leakage may not take place for some hours after injury, and there is good evidence that in certain cases the rupture may even become entirely sealed off. It is best to close these perforations of the small intestine with purse-string or interrupted sutures of fine silk and wherever possible the suture of such perforations should be carried out in preference to resection.

Resection, however, is indicated in the following conditions: (1) When multiple perforations are found close to one another; (2) when a coil of intestine is lifeless from being pulped, from being severely contused as by crushing, from thrombosis of its vessels or by detachment of its mesentery for an inch or more; (3) in those cases where the gut has ruptured between the leaves of the mesentery; (4) in cases where the gut wall surrounding a large perforation is markedly congested and edematous; (5) for certain cases of incomplete rupture of the intestine; (6) in some contusions of the mesenteric portion of the bowel where vascular damage or extravasation of blood occasions anxiety as to the success of suture.

Whether the anastomosis following resection of the affected segment of bowe is carried out by the end-to-end or th side-to-side method will depend upon th preference of the surgeon. The writer's custom is to restore intestinal continuity by the closed or aseptic method, using Wangensteen's twin clamps.

Colon. Wounds of the colon are, of course, less common and less often multiple than those of the small intestine. They are, however, very lethal injuries, and the all-round mortality for penetrating lesions is still about 60 per cent. Rupture of the large gut carries a grave prognosis because such are so often retroperitoneal and therefore easily overlooked; the laceration of the gut is usually extensive; bruising is marked; and there is frequently infarction of the feeding blood vessels. Furthermore, the bowel contents escape very readily nd are highly infective in nature, much re so than those of the small intestine. fecal contents, too, which escape ntain large quantities of anaerobic gas-forming bacilli; and finally, a fulminating retroperitoneal cellulitis is a common and fatal sequel. The prognosis is grave in these cases because many surgeons still persist in carrying out intraperitoneal resection and anastomosis combined with cecostomy for these serious injuries.

Suture of a laceration of the large bowel is rarely indicated save for small punctures involving the anti-mesenteric portion of the bowel. These can, in a number of cases, be closed with a series of purse-string sutures, after which the area may be protected with an omental graft; but in the majority of cases some type of exteriorization operation offers the best hope of recovery. The writer's preference is exteriorization of the devitalized loop—colostomy—or a modified Paul-Mikulicz operation on the lines suggested by Devine and Lahey. The damaged portion of bowel is mobilized, the proximal and distal limbs of bowel are sutured together, and after closing the abdominal wall snugly around the protruding limbs of gut, the lifeless or damaged portion is trimmed away, leaving the two ends of the colon firmly embraced by enterectomy forceps fully two inches above the surface of the skin. The clamp on the proximal or functioning limb of colon is removed in thirty-six hours, but the distal clamp is left *in situ* until it cuts away about a week later. This clamp on the distal limb tends to prevent any retraction of the double-barrelled colostomy and helps to steady the two limbs of bowel while they are becoming sealed off and adherent in the abdominal incision through which they protrude. The spur is crushed through with an enterotome a fortnight later, and about six weeks after this the single colostomy stoma is successfully closed by an extraperitoneal operation.

Stomach. Injuries of the stomach alone have a good prognosis—60 per cent recovery rate, as the stomach has an excellent blood supply and its contents are usually sterile. But, unfortunately, penetrating wounds of the stomach are often associated with injuries to adjacent structures such as the liver, the retroperitoneal duodenum, the upper coils of small intestine, etc. If there is a laceration in the anterior wall of the stomach, after this has been closed with a two-tier suture of fine silk, the posterior wall should be examined after tearing through the gastro-hepatic omentum to gain access to the lesser sac. With fissures or perforations of the lesser curvature, the gastro-hepatic omentum will have to be detached in order to simplify the exposure of this portion of the stomach before suturing the defect. Lacerations of the pylorus, after they have been duly repaired, will often demand gastro-jejunostomy as an added procedure on account of the attendant narrowing of the gastric outlet. Following suture of perforations of the stomach, an indwelling Ryle tube and continuous suction-siphonage will do much to hasten recovery.

Duodenum. Wounds of the duodenum are comparatively rare and are associated with a high mortality, as they are so often retroperitoneal and are accompanied by injuries which involve the head of the pancreas, the portal vein, the liver or the kidney. A retroperitoneal hematoma in the region of the second portion of the duodenum demands careful exploration and in these cases the duodenum should be mobilized by Kocher's method so that a clear view can be obtained of the hilum of the kidney, the inferior vena cava and the posterior aspect of the duodenum itself.

Liver. The dimensions and the velocity of the missile play an important part in determining the type of hepatic lesion which may be almost protean in character (Gordon-Taylor). It may suffer all sorts of trauma, from minute punctures and tears or tunnelled holes to complete pulping. If the track of the bullet or the fragment of shell indicates that only the liver itself is injured and if the signs and symptoms of hemorrhage are not marked, expectant treatment should be instituted. Large linear tears of the liver are best sutured after plugging omentum or muscle into the rent. With extensive lacerations in which it is impossible to repair the liver by suture, bleeding is best controlled by firmly plugging the cavity with vaseline gauze and leaving this *in situ* for about five days. A slight degree of jaundice is common after injury to the liver and is not of any great import; but icterus developing later is always a sign of grave significance and often indicates the presence of serious sepsis.

Gall bladder and bile ducts. These structures are rarely injured in penetrating or perforating wounds of the abdomen or thorax. Such injuries appear to be more common in crushing accidents in which the right costal margin is forced inwards towards the spine. A severely torn gall bladder demands cholecystectomy. A completely severed common bile duct may be repaired over a T-tube or the proximal end may be ligatured and if the gall bladder is healthy it may be anastomosed to the intestine. If during operation there is evidence of a laceration of the biliary channels but it is impossible to locate its exact presence, it is often wisest to institute external drainage and to tide the patient over his illness in the hope that a track to the skin surface will form in the process of healing. Later on, at a second operation, some type of reconstruction procedure may be performed.

Spleen. The death rate from war injuries of the spleen alone is about 45 per cent, whereas in peace time the mortality does not exceed 20 per cent. The spleen may be damaged by penetrating injuries, subparietal crushes, or by the effects of blast, and is one of the commonest organs in the abdomen to be injured from any type of war wound. In fatal non-penetrating injuries it has been shown that a ruptured spleen is the most frequent cause of death. The best treatment for a lacerated spleen is splenectomy. Attempts at suturing this friable organ are on the whole most unsatisfactory.

Kidney. Injury to the kidney may be single or be associated with some abdominal trauma which involves other organs, e.g., colon, duodenum, etc. All grades of injury are seen, from a simple contusion to extensive disruption of the whole organ. The kidney is staunch and its resistance to injury is of the highest order, and as it possesses remarkable powers of recuperation, nephrectomy is seldom indicated. The main indications for its excision [illegible] (1) injury [illegible] renal artery or v [illegible] ivis ureter; (3) profuse hemorrhage from a fragmented kidney; (4) hopelessly pulped organ; and (5) secondary hemorrhage.

The kidney should be explored through the loin and if not found to be so lacerated as to jeopardize its chance of recovery and if its blood supply is intact and the ureter is undamaged, the peri-renal space should be drained and an expectant attitude adopted.

GROUP III—THE MANAGEMENT OF THE HOPELESS CASE

These cases which are doomed to die are best segregated in a special ward where they are away from other patients who are awaiting operation. They should be made as comfortable as possible, and where morphine is indicated it should be given in liberal doses. No case should [illegible] regarded as beyond the range of surgical aid until the patient has been seen [illegible] two experienced surgeons in consultation and every aspect of the case has been duly considered and a unanimous opinion arrived at.

CONCLUSIONS

(1) In war wounds of the abdomen the ideal to be aimed at is operation within six hours of the receipt of injury.

(2) Either the surgeon must be brought to the patient or the patient to the surgeon within this time.

(3) The cases are best divided into three groups:

(a) Doubtful cases
(b) Cases which require immediate operation
(c) Patients who are obviously dying and are beyond surgical aid.

(4) An account of the management of the doubtful cases and of those which are in need of immediate operation is given, together with a description of the technical procedures recommended for lesions of the individual viscera.

(5) The Paul-Mikulicz operation is advised for serious lacerations of the large bowel.

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SUMARIO

La mortalidad de 50 a 75 por ciento que resulta de los traumatismos abdominales por la presente guerra total depende en gran parte del factor tiempo. En los casos que requieren intervención quirúrgica el tiempo ideal para la cirujía es durante las primeras seis horas.

Los casos de traumatismos abdominales se dividen en tres grupos:

(a) Casos dudosos
(b) Casos que requieren cirujía inmediata
(c) Casos que están en el estado moribundo.

Se ha presentado el método de tratamiento de los casos dudosos y de aquellos que requieren la intervención inmediata, y se ha descrito las diferentes técnicas operatorias que el autor recomienda en las diferentes lesiones abdominales.

El autor aconseja la operación de Paul-Mikulicz en las laceraciones extensas del intestino grueso.

RÉSUMÉ

Dans les plaies abdominales de guerre, le facteur temps a une importante influence sur la mortalité. Dans les cas demandant l'intervention chirurgicale, il importe d'opérer dans les six heures qui suivent la blessure.

Les traumatismes abdominaux peuvent être classifiées en trois groupes:

(a) Les cas douteux

(b) Les cas dans lesquels l'opération immédiate est de rigueur

(c) Les cas déséspérés, le blessé étant mourant, dans lesquels la chirurgie est impuissante.

L'auteur décrit le traitement à employer dans les cas douteux et aussi dans les cas où l'intervention chirurgicale est urgente, n'admettant aucun délai.

L'auteur nous donne une description détaillée des procédures techniques auxquelles on doit recourir pour les lésions des différents viscères. Il préconise le procédé Paul-Mikulicz pour les grandes lacérations du gros intestin.

Выводы

Смертность после абдоминальных повреждений, могущая достич 50-ти, или даже 75 ипроцентов, зависит по большей части от елемента времени. При случаях требующих хирургического вмешательства следует оперировать, как идеал, в течении шести часов. Брюшные повреждения делятся на три группы:

(а) Сомнительные случаи.

(б) Случаи требующие экстренной операции.

(ц) Умирающие пациенты, которые находятся вне хирургической помощи.

Автор описывает лечение первых двух груп и технику операций при повреждениях абдоминальных органов.

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Afecciones Oculares de Origen Dentario*

(Ocular Disturbances of Dental Origin)

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SUMMARY

Bucco-dental lesions may produce lesions of the eye or its annexes, and vice versa.

Transmission can take place by contiguity; (a) by immediate contiguity, especially through the upper maxillary and its sinus lying between the orbit and the mouth; (b) by mediate contiguity, through lesions of the cranio-facial sinuses. These lesions are either coincident (polysinusitis) or propagated from one another and then to the optic nerve; sphenoidal sinuses or posterior ethmoidal cells to the orbit and the eye to the lachrymal ducts or maxillary sinus.

Transmission may be by the vascular route, i. e., through the inflammation of the walls of the vessels, especially through venous channels, because of the orbital and retromaxillary anastomosis. Infections may cause the loss of vision and occasionally life by invasion of the cavernous and other intracranial sinuses.

Transmission may occur by the sanguineous route if toxins, microbes or substances producing allergy enter the general circulation.

Of course, buccal foci must always be treated in order to avoid ocular infections, especially before performing operations in which it is necessary to open the globus oculi.

Transmission by the lymphatic route has not been proved to date. Transmission by the nervous route is comparatively frequent, because of the common sensitive innervation from the trigeninus. Sensitive, sensorial, reflex, motor (intrinsical and extrinsical), vasomotor and secretory disturbances can take place.

DE antiguo es conocido el hecho de que ciertos dolores dentarios se irradian al ojo y el de que ciertos dolores oculares y orbitarios se irradian a los dientes. La inervación común por el trigemino explica vagamente estas relaciones. Con el nombre de "diente del ojo" se designa de antiguo al canino superior al que el vulgo con razón o sin ella hace responsable de los trastornos que ocurren en el ojo correspondiente. Como ha ocurrido en otros dominios después de un período de hipotesis basadas más o menos en la observación de hechos aislados se llega al período de las afirmaciones positivas que es el en que nos encontramos. Es de justicia consignar que ha sido en Norte America en donde ha surgido basada en hechos ciertos apoyados por la bacteriología y por la radiografía la teoría de la "infección focal" a partir de focos dentarios o peridentarios los cuales no son ya solo lesiones groseras evidentes de caries, flegmones . . . etc sino otras

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* Presented at the Third International Assembly of the International College of Surgeons held in Mexico City, August, 1941.

il décroît rapidement, quoiqu'il reste presque toujours d'une prononcée valeur dioptrique, étant généralement inverse ou inverse oblique, comme le montrent les observations ophtalmométriques. Le manque d'une bonne correction optique, non seulement de l'aphakie mais aussi de cet astigmatisme cicatriciel, est la cause de que, dans des cas avec un excellent résultat opératoire, l'oeil n'atteigne pas l'acuité visuelle qu'il devrait avoir.

8. Il y a des manoeuvres opératoires, presque toujours inutiles, qui allongent indûment l'acte opératoire: telles sont l'akinésie de l'orbiculaire, seulement justifiée chez des sujets indociles et nerveux. La suture de la peau des paupières, pratiquée par quelques-uns, est absurde.

9. En général chaque manoeuvre opératoire doit être clairement indiquée.

Some Observations and Deductions Based on Present Day Applications of Chemotherapy in the Practice of Surgery*

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SINCE man received his first wound, those in charge of its care have sought some means of limiting the infection and the preservation of the affected part. We read of the prayers to the various Gods; of the ability of witchcraft and herbs; of the powers of animal and human excreta; and even to the sacrifice of human and animal life. However, with the discovery by Anton Van Leeuwenhock of the microscope, the postulates of Koch, concerning pathogenic bacteria, the staining methods and experimental work of Pasteur, and a culmination of all of these by Lister in his work on sepsis, the progress of surgery has been based primarily on three distinct lines—(1) the mechanical; (2) the physiological and (3) the combating of infection. In this communication we shall limit ourselves entirely so far as possible, to the discussion of infection in surgery. Certainly, anyone practicing surgery today should be mechanically qualified. Physiologic principals have long been well established so that little mention need be made. Biochemistry, an important adjunct of surgery, in recent years has left the empirical stage and is now in the qualitative st[illegible] Any man who today assumes the re[illegible] the life of the patient with[illegible] the present clin[illegible] labo[illegible] cedures for the proper evaluation of his patient from the standpoint of pre- and post-operative care is, in our opinion, guilty of neglect. Any hospital so inadequately equipped that it cannot carry on these clinical procedures, should not be allowed to receive surgical patients.

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SKIN PREPARATION

It is an accepted fact that skin sterilization cannot be complete. The moisture on the surface of the skin prohibits deep infiltration of any so-called bacteriocidal agents. In spite of all of this, the surgical profession has been gullible enough to fatten the purses of many of the pharmaceutical houses by purchasing huge quantities of the variegated colored antiseptics. In 1933, we advocated the use of a simple soap and water thoroughly applied. This washed all the fats from the surface of the skin and opened the pores so that any bacteria locked within might be released by nature's own protective method, which is washing from within out. This was followed by the simple application of alcohol. We now advocate 95 per cent alcohol and 10 per cent acetone by volume for topical application. We have sufficient evidence in traumatic surgery to prove this is the most efficient preparation of the skin possible. Recently, Dr. Hatfield and Miss Lynch, of Harrison Surgical Research Laboratory, in Philadelphia, proved this to their satisfaction in their experimental work. Furthermore, we would emphasize the aftercare of the surgical wound. It has always been a puzzle to us, why one should place gauze over a fresh wound. The gauze absorbs the bacteria-laden perspiration from the neighboring skin surface and with motion of the body gently massages it into the wound. We would recommend that the fatty layer, prior to closure, be thoroughly scrubbed with tincture of green soap, having a soy-bean base, and then thoroughly rinsed out with sterile water. This removes liquid fat and fat particles which when mixed with serum, become a most efficient bacterial media. The wound itself should be left open and protected from bedclothing by a shield.

INFECTED WOUNDS

Complete débridement of the wound is still and always will be, a surgical procedure which must be done adequately by competent surgeons. We would rather see the intern fumble through an appendectomy, than destroy the function of a part because of inadequate débridement. Before any surgical procedure is attempted on the wound, it should be thoroughly cleansed with soap and water. The statement that such treatment is too irritating and delays healing has not been found true. Smith, Czarnetsky and Mudd, have ably demonstrated that large amounts of mercurial antiseptics become completely ineffective, either as bacteriocidal or bacteriostatic agents, because of chemical protoplasmic affinity.

Smelo demonstrated that many of the mercurials inhibited or destroyed tissue growth even when applied in weaker concentration than the manufacturer advised. Anderson proved that minor surface contamination or mild clean wound infection did not interfere with wound healing when compared to the Carrel-DuNoy formula. If we pause a moment and reflect on nature's procedure of protection, it becomes obvious that the surgeon has but two duties to perform; (1) to get rid of all devitalized tissue, that there be no sloughing which is a vital asset in the development of bacterial pabulum; and (2) that where this cannot be adequately done an interference by chemotherapy be carried out. Fortunately, for the modern surgeon, he has both within his power, but we emphasize that good surgery is still paramount. During the World War I, there was developed the Carrol-Dakin treatment, which was in truth the continuous application of chlorine to the affected part. That this treatment is still good is proved by Sherman and his group in Pittsburgh. Later came a slower acting substance known as Dichloramin-T. Today we have a counterpart of these preparations in Azochloramid. The action of chlorine seems to be that of detaching devitalized and necrotic tissue from healthy tissue. If we add to this sulfanilamide, which has been proved by John S. Lockwood and many others to be *bacteriostatic, then* we have an ideal preparation to place within or upon the infected wound in order that we may not inhibit nature from proceeding in her efficient and well-organized methods. May we divert for a moment to give you the formula which we have used to good advantage. By *using anhydrous* wool fat, we encourage reverse osmosis. Enough spermaceti is added to raise the melting point to slightly above body temperature so that the part is continuously *bathed in* chlorine *and sulfanilamide*.

Azochloramid (1:125 in Triacetin)	25.0
Sulfanilamide (Powder)	60.0
Spermaceti	12.0
Wool Fat, Anhydrous (Lanolin)	400.0

The value of this *emulsion has been* proved so often that it is no longer experimental.

SULFANILAMIDE AND ABDOMINAL INFECTIONS

Our reason for using sulfanilamide alone is two-fold: First, we desire to give one drug a *thorough test; second:* when we place sulfathiazole in a wound it was not readily dissolved. Radvin states that he actually found it encysted. There is no need to go into the question of healing in the presence of *sulfanilamide, since* we believe Bricker and Graham, Taffel and Harvey, Zintel, and many others have shown conclusively that there is no inhibition to normal health. Key and Burford found that compound fractures healed just as well with sulfanilamide as without, as was also found by Charles Venable and Walter Stuck, so that we *feel* a review at this *time* would be entirely academic. John Lockwood in his experimental work, proved that the action of the drug takes place at the feeding ground of the bacterial invasion. Because of this we have *limited our work* entirely to its local application and we have some very definite views concerning *complimentary administration* by other routes and some theories as to its mechanics. In our review of the literature, we failed to note anyone who recalls that prior to the advent of sulfanilamide, *only* 22 per cent *of the* peritonitis cases died. It is our opinion that more cognizance should be *made of* the 78 per cent who lived. Let us not lose sight of phagocytosis, opsinins, bacteriophage and so-called body resistance. It is an established fact that the prolonged use *of sulfanilamide,* or its *derivatives,* produces *blood changes*. Transfusions have been recommended as a supportive method when giving sulfanilamide-therapy. If we accept the work of John Lockwood and his colleagues on the one hand, *and the findings of the clinical* laboratory on the other, why should we break down the known body defenses, as mentioned above, by continuous uses of the sulfanilamides by mouth or parenterally? While our series of cases is not large, it has proved to us that the local application of sulfanilamide following *adequate surgery,* will *preserve life* without complimentary administration. Ravdin and others, suggest that we maintain a blood level of 10 mgm. per 100 c.c. of blood in order to continue *combating the infection;* yet, [illegible] mitted fact [illegible] ...cal co... must be [illegible] ...more tralize [illegible] eptones in order to starve the bacteria resent. Thus it is essential that the mount of sulfanilamide present be in he greatest concentration possible. Au-opsies have shown multiple abscesses, hich developed in spite of this therapy, he therapy masking by morbidity and ack of reactive power the true condition f the patient. Here we wish to venture n hypothesis. Coutard came to the con-lusion that there was a period in cell ife when the cell was most susceptible to adiation therapy and the continuous ombardment created a cell, which, to all ntents and purposes, was radiant-re-istant. May we not apply this same heory, though not the same mechanism, o the ability of sulfanilamide to destroy athogenic organisms? If this be the ase, and we believe it is, then we should ave a massive offensive of the drug at [illegible] site of action for quick destruction, s previously stated. By prolonged use f the drug, the cell may evolve either a ew method of feeding, a more potent nzyme, or a definite evolution within it-self. In our research an attempt was made to standardize for better evaluation. All patients received 8 gm. of sulfanilamide crystals. Where it was used within a sinus tract, the crystals were placed in suspension in sterile water and injected so slowly that the drug precipitated and only the water returned. There have been no deaths in our series of cases but some wounds have broken down and all patients did not get well in ten days. A study of the rate of absorption from various parts of the body shows in some cases varying rates from the same part under different pathologic conditions. This is interesting because, at least in the abdomen, we may verify certain activities of the peritoneum that heretofore were assumed. Likewise, we feel that for the first time we may determine the quality of the systemic toxicity from the peritonitis, based on absorption and not on local pathology and bacteriology. It is to be noted that the rate of absorption from the abdominal cavity is not the same in various cases, even though the surgical and pathologic diagnosis was general peritonitis.

Another observation of interest for two reasons is: First, by using a colostomy, we are able to demonstrate the rate and maximum absorption from various segments of the gastro-intestinal tract, and (2) even though there is 100 per cent local application, the blood stream concentration is low. Thus we emphasize the above stated postulate, namely, that it is the local application that is all important, if full benefits of this type of chemotherapy is to be obtained. For this experiment we obtained the cooperation of a female with an inoperable carcinoma and used her colostomy of eighteen months' duration, to measure the rate of absorption. There was no ulceration of the malignant growth at the time this was done and her general condition was excellent. The standard 8 gm. dosage was used.

SUMMARY

First, we have attempted to bring out the value and simplicity of surgical skin sterilization and a rationale for the postoperative care of the wound. Second, we have emphasized the value of good surgery in traumatic wounds and the aid that may be obtained from chemotherapy. Third, we have given our reasons for disproving supplemental administration of sulfanilamide and presented a hypothetic answer for its local use. Fourth, we have considered the rate of absorption from various parts of the body under various pathologic conditions, and have emphasized that statistics based on local diagnosis of peritonitis should be revamped in the light of present findings.

SUMARIO

En este trabajo, acerca de la aplicación moderna de la quimioterapia a la cirugía, se tratan los siguientes puntos: 1°. se pone de manifiesto la utilidad y la sencillez de la esterilización quirúrgica de la piel y el tratamiento postoperatorio racional de la herida; 2°. se recalcan la utilidad de las buenas operaciones quirúrgicas en *heridas traumáticas* y la ayuda que suministra la quimioterapia; 3°. se expresan las dazones de por qué se desaprueba la administración suplementaria de sulfanilamido y se presenta una razón hipotética de su aplicación local; y 4°. se ofrece una gráfica en la que se muestra la rapidez de absorción en las diversas porciones del cuerpo *en varios* estados morbosos, y al mismo tiempo se hace evidente la circunstancia de que es necesario corregir las estadísticas fundadas en el diagnóstico local de peritonitis, de acuerdo con los conocimientos modernos.

RÉSUMÉ

Premièrement, nous avons essayé de démontrer la valeur et la simplicité de la stérilization de la peau et aussi une méthode pour le soin post-opératoire des plaies. Secondement, nous avons affirmé *la valeur de la chimothérapie bien* comprise. Troisièment, nous avons exprimé l'inutilité de l'emploi supplémentaire du sulfanilamide et présenté une répouse hypothétique pour son emploi local. Quatrièment, nous avons considéré, la durée de l'absorption du remède selon l'organe et *selon* les conditions pathologiques existantes. Les statistiques que nous avons sur l'incidence du diagnostic de peritonite locale, demande à être revues et *corrigées* en vue des méthodes les plus récentes.

Concepto de Tumor Abdominal Oncoquiliagnosis*

(Differential Diagnosis of Abdominal Tumors)

P. L. MIRIZZI, F.I.C.S. (HON.)
CORDOBA, ARGENTINA

SUMMARY

The author discusses the differential diagnosis of the various tumors encountered in the abdominal cavity. All forms of laboratory armamentaria at the disposal of the surgeon are called into play in establishing a *correct* pre-operative diagnosis. He points out that radiography is occasionally misleading. However, radiography, combined with other diagnostic methods may lead *to the desired goal, and he* coins the term "oncoquiliagnosis" to designate this particular form of approach in establishing the identity or type of tumor under consideration.

LAS obras de los grandes cirujanos, en las últimas décadas del siglo pasado demuestran el impulso enorme que dió la [illegible] tomía ex dora al conocimiento de los tumores. En aquel entonces, ya en el período francamente listeriano y con la ayuda eficaz de la anestesia general, se hicieron posible las intervenciones abdominales, seguidas, en muchos casos, de la extirpación del tumor. !Cuánto debe la mejor inteligencia de los tumores abdominales a esa pléyade de maestros, que, bajo los conceptos de Pasteur y de Lister, practicaron, sobre bases sólidas, la cirugía abdominal! Todos ellos, conscientes del gran impulso que daban a un capítulo aún obscuro de la clínica, estaban lejos de pensar que habían llegado a la meta. "Sería insensatez creerlo (Pean)."

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* Presented at the Third International Assembly of the International College of Surgeons held in Mexico City, August, 1941.

Pues bien, hoy en día, nuestra posición más avanzada que la de otrora, colocados en un camino donde se ha alineado una serie de jalones, obliga a contestar en la misma forma, sin desconocer que el diagnóstico se ha precisado con el advenimiento posterior de nuevos procedimientos exploratorios.

En el presente, los medios disponibles, al lado de la experiencia adquirida, están muy distantes de pronunciar la última palabra; pero, gracias a la fructífera cosecha que se recoge día a día, se ha enriquecido enormemente el campo de la *clínica y ampliado el concepto de tumor* abdominal.

El concepto de tumor abdominal, visto por los clásicos desde un ángulo estrictamente anatómico incluía, "las masas sólidas o líquidas, espontáneas o accidentales, y toda tumefacción apreciable *mediante* los *medios* físicos comunes, tales como la inspección y palpación" (Péan).

Los últimos adelantos aportados por la radiología—tránsito gastrointestinal, colecistografía, pielografía, neumorradiografía exigen una definición más amplia y precisa. Un tumor abdominal no siempre es accesible a la palpación, en cambio, se comprueba su existencia mediante las exploraciones especiales antes mencionadas.

La radiología, sin sustituir en absoluto a los medios de exploración exclusivamente clínicos, ha contribuído, en los últimos tiempos, más que ningún otro método, al reconocimiento y estudio de los tumores abdominales.

En los textos de diagnóstico, con frecuencia se llama la atención sobre todo lo que tiene un carácter fenomenal, lo que salta a la vista, en una palabra, todo lo que haya adquirido un desarrollo insólito. En tal circunstancia, el diagnóstico se hace "prima facie" por la simple inspección o el examen rápido y superficial.

Hoy, gracias a la fineza de los métodos de exploración y a la educación media de los pacientes, es más frecuente sorprender la afección en un período evolutivo, en que el diagnóstico es un problema, cuya solución se cifra en el empleo adecuado de todos los medios a nuestro alcance; la prescindencia de uno de ellos conduce, con frecuencia, a falsas interpretaciones.

Atenerse estrictamente a la descripción esquemática de los clásicos, implica incurrir en frecuentes errores de diagnóstico. Así, por ejemplo, los textos existentes dicen, a propósito de los tumores del mesenterio, que sus caracteres principales son: gran movilidad, matidez en su parte saliente y sonoridad alrededor de dicho punto. Si el médico fuese a basar su diagnóstico sobre dichas características, considerará como tales un gran número de tumores abdominales implantados en otras regiones. La experiencia demuestra, a diario, la inexactitud del diagnóstico fundado en la simple movilidad y sonoridad.

Solamente la asociación armónica de los datos suministrados por la clínica, el examen de los rayos X, combinado a las substancias de contraste, conducirán al diagnóstico topográfico exacto del tumor. Omitir el auxilio de la radiología, en tales casos, es exponerse a errores garrafales, cuya consecuencia se hace sentir no sólo en la imprecisión del diagnóstico, sino, que, a veces, conduce a una mala elección de la vía operatoria.

Se designará, en suma, con el nombre de tumor abdominal toda masa accidental o permanente, demostrable por los recursos exploratorios comunes, o cuando bajo la observación radiológica afecte en forma estable los contornos y relaciones normales de los órganos abdominales.

La definición enunciada, gracias a la clínica y radiología, precisa el alcance que debe dársele al concepto de tumor, con prescindencia aparente de su naturaleza y de todo factor causal; en una palabra, comprende, en el estricto sentido del enunciado, el diagnóstico topográfico, pero, tácitamente incluye el diagnóstico etiológico, por cuanto, tanto uno como otro, son inseparables.

IMPORTANCIA DEL TRÁNSITO GASTRO-INTESTINAL EN LA ONCOQUILIAGNOSIS

El estudio del tránsito gastro-intestinal tiene importancia extraordinaria, en el diagnóstico topográfico de los tumores abdominales. Los distintos segmentos del tubo digestivo sufren desplazamientos en uno u otro sentido, según el contacto, volumen y grado de adherencias entre la masa tumoral y el segmento digestivo. Desde el estómago hasta la S sigmoidea es dable observar distintos signos radiográficos.

Estómago—El estómago, desde el punto de vista radiológico y del objetivo que se persigue, consta de las siguientes partes: tuberosidad, cuerpo, antro y píloro. Por otra parte, se tendrá presente que el órgano tiene dos ejes: el longitudinal y el transversal. El estómago, alrededor de susodichos ejes, sufre movimientos de torsión: el órganoaxial y el mesentéricoaxial. El primero corresponde a las torsiones según el eje longitudinal; su dirección sigue el sentido de las agujas de un reloj, de izquierda a derecha, a sino en el sentido contrario, de derecha a izquierda. La torsión mesentéricoaxial se cumple alrededor del eje transversal del mismo.

Además, es prudente recalcar que el examen gástrico debe hacerse sistemáticamente en el sentido ántero-posterior y transversal. De esta manera se apreciará con exactitud la dirección y el grado de desplazamiento experimentado por los distintos segmentos del estómago y por consiguiente será fácil sacar conclusiones precisas sobre la posición exacta de la masa tumoral.

En términos generales, el estómago se desplaza simplemente o se tuerce alrededor de uno de sus ejes.

Desplazamiento. — La gran tuberosidad del estómago y el cuerpo del mismo se desplazan totalmente hacia la línea media. No es extraño observar en las esplenomegalias, de gran desarrollo, que el estómago se sitúe por delante de la columna vertebral.

Los tumores renales, pararrenales y retroperitoneales laterales, superiores, habitualmente rechazan los dos tercios inferiores del estómago hacia adentro. La incidencia transversal comprueba que dichos segmentos son llevados hacia un plano más anterior.

El desplazamiento interno del estómago, con un marcado aplastamiento de la gran tuberosidad, lo he observado en un caso de fibrosarcoma del ligamento gastro-colo-hepático. No es raro que tal cosa suceda, dada la intimidad que existe, en estos casos, entre el estómago y la masa tumoral.

Torsión. — Los grandes tumores del páncreas, al desplazar el estómago, en un sentido o en otro, según que se abran paso por encima de la pequeña o de la gran curvatura, habitual [illegible] lo [illegible]hazan hacia adelante.

[illegible] miento anterior y late[illegible] alrededor de su eje longitudinal. Pocas veces se ven desplazamientos tan fenomenales, como los producidos por los tumores quísticos del páncreas o la bursitis omentalis pseudoquística, que en rigor está íntimamente ligada a la pancreopatía quística. Es clásico considerar, que en esta variedad de tumores, el estómago, en general, afecta la forma de clepsidra.

En la incidencia ántero-posterior, cuando el tumor quístico del páncreas se abre paso a través del ligamento gastrohepático, el cuerpo es el que sufre mayor desplazamiento; éste se hace la izquierda. En el estudio radiológico se ve la malla de la mucosa gástrica a nivel del cuerpo, coronado por la substancia opaca retenida en la gran tuberosidad y abajo, junto al antro, otra buena porción de bario. Se observan, naturalmente, los signos propios de las compresiones extra-gástricas, vale decir, desplazamiento simple, sin perturbar el curso del quimo, el cual se elimina casi siempre alrededor de las seis horas de la ingesta.

En los tumores quísticos del páncreas, que afloran a través del ligamento gastro-cólico, se observa una gran escotadura a nivel de la gran tuberosidad del estómago.

Tanto en uno como en otro caso, el estómago ha sufrido un cierto grado de torsión alrededor de su eje longitudinal (torsión órganoaxial), En la evolución gastro-hepática se tuerce en el sentido de las agujas de un reloj y en la gastrocólica en el sentido contrario.

La incidencia transversal revela, en forma clara y evidente, el rechazo anterior del estómago. El hecho contrasta con el desplazamiento opuesto, motivado por los tumores anteriores, v.g. los del lóbulo izquierdo del hígado. Sin embargo, hay excepciones, que inducen "prima facie" a errores de interpretación; me refiero a la aerocolia del ángulo izquierdo, que es capaz de desplazar el estómago hacia adelante, de modo que, si por azar coexistiese un tumor quístico del hígado, induciría a pensar en una masa posterior, retrogástrica.

El antro y el píloro sufren también torsiones en dos circunstancias distintas; en los tumores del páncreas, particularmente tumores sólidos (sarcoma) y en los grandes tumores pelvi-abdominales.

En estos casos se observa lo que se ha llamado "imagen faloidea u "obscena" (Mathieu). La torsión, en estos casos, se produce en el sentido contrario a las agujas de un reloj. En algunos casos, sobre todo en los tumores del páncreas, que están en íntimo contacto con dicho segmento gástrico, se observa el signo de "almohadilla" descrito por los autores americanos, en el cual, ya sea por presión local en el estudio radioscópico u observando el tránsito gástrico, se dibujan las mallas longitudinales de la mucosa del antro.

Duodeno.—El duodeno, en los tumores quísticos de la cabeza del páncreas, experimenta un desplazamiento centrífugo, que en algunos casos llega a describir una gran C. El desplazamiento es menos aparente en las formaciones neoplásticas y hasta puede faltar. En la necrosis aguda del páncreas, también se observa el agrandamiento de la C duodenal, formando parte de un síndrome radiológico descrito por Bronner.

Intestino delgado y mesenterio.—Los tumores de gran volumen retroperitoneales e intraperitoneales desplazan las asas delgadas en distinto sentido.

Para formarse una idea cabal del mecanismo de dicho desplazamiento es acertado comparar el mesenterio y las asas como un árbol, provisto por consiguiente de raíz, tronco y ramas.

Pues bien, en términos generales, puede concluirse, de acuerdo con la iconografía radiológica, que los tumores retroperitoneales actuan sobre todo el árbol o sea desplazan, en primer lugar, la

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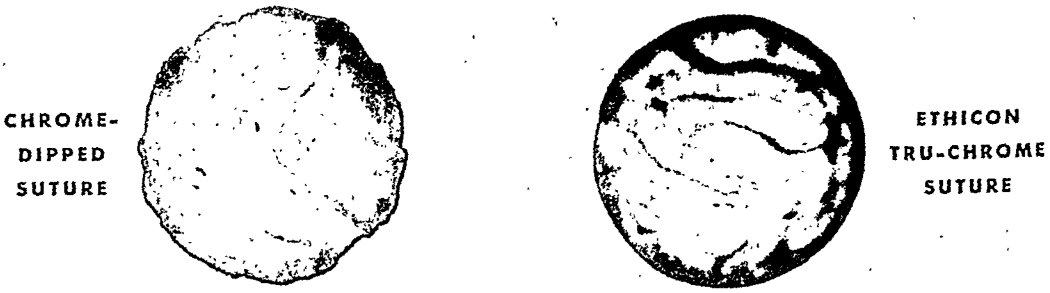

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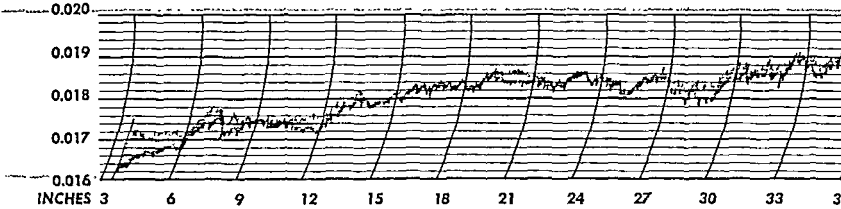

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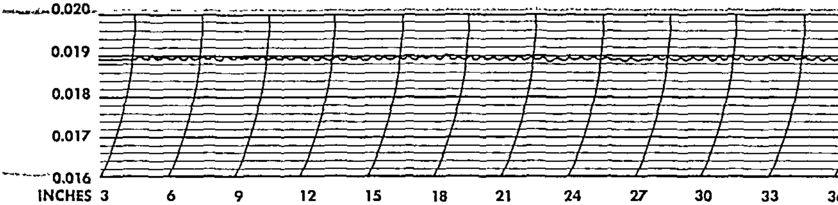

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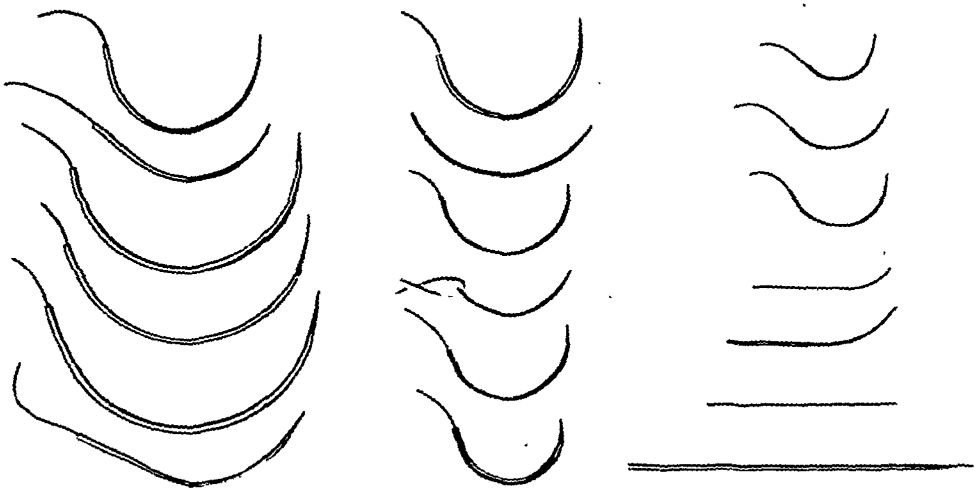

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raíz del mesenterio en dirección opuesta a la implantación del tumor, tanto que los tumores intraperitoneales y en particular los pelvi-abdominales rechazan las ramas y las hojas del árbol o sea el vuelo de las asas.

Concretando, los tumores retroperitoneales derechos desplazan la raíz del mesenterio hacia la izquierda, de tal manera que las asas se sitúan en el hemiabdomen contrario y en la pelvis. Hay una excepción; los grandes tumores quísticos del lóbulo derecho del hígado a evolución póstero-inferior se comportan exactamente como tumores retroperitoneales.

Los tumores retroperitoneales izquierdos rechazan la raíz del mesenterio hacia el lado derecho y las asas delgadas se conglomeran en ese lado. Según los documentos personales no hay ninguna excepción a esta regla.

Los tumores pelvi-abdominales (grandes tumores del ovario, fibromas gigantes) se coronan con las asas delgadas; éstas se sitúan a la derecha, izquierda y arriba.

Colon derecho.—Los tumores que vienen de la parte inferior lo levantan y lo despliegan, de modo que es frecuente observar la disposición en escuadra del ángulo cólico derecho; también es llamativa la posición alta del ciego. Sin embargo, hay excepciones. Los tumores renales suelen desplegar y levantar el colon derecho, pero llama la atención que hay una tendencia natural, en estos casos, a rechazar más bien el ciego hacia abajo, o en su defecto, respetar la posición ordinaria en la fosa ilíaca.

Los tumores retroperitoneales, en general, desplazan el colon derecho hacia adelante y adentro, a veces también hacia abajo.

Colon izquierdo.—En el colon izquierdo se destacan dos porciones que ofrecen signos radiológicos de positivo valor semiológico: el colon izquierdo y la S sigmoidea.

El colon izquierdo, habitualmente está rechazado hacia abajo en las esplenomegalias. Los tumores del páncreas cierran el ángulo cólico izquierdo.

Los tumores renales y pararrenales provocan múltiples desviaciones, al extremo que no es posible establecer una regla fija, ni existen fundamentos, según las desviaciones, para concluír si estos tumores son intra o retroperitoneales.

Sigmoidea. — En los tumores de mediano volumen, originados en los genitales internos, de evolución abdominal y dotados de un pedículo que les permita un cierto desplazamiento en todo sentido, no siempre es posible afirmar la implantación pélvica, máxime cuando el examen váginorectal no es posible (niñas, adultas con himen sano y resistente, malformación de los genitales externos, etc.). Suelen confundírselos con tumores implantados en el abdomen, dotados de gran movilidad, tales como quistes del mesenterio, del epíplon, etc.

Los grandes tumores de los genitales internos, particularmente los del ovario, aquellos que llenan la cavidad abdominal, ponen también al clínico en aprietos, no obstante contar con un examen vaginal fácil. Por otra parte, no es raro que ciertas pacientes que se presentan al médico con un gran tumor, hagan difícil el diagnóstico, sobre todo cuando ignoran datos sobre el punto de partida de la masa tumoral. En estos casos, los errores de interpretación son frecuentes. No sería extraño que la uronefrosis, la hidropesía gigante de la vesícula, el quiste del páncreas, un gran bazo quístico (error de Péan), la ascitis misma a gran tensíon, fuesen considerados como quiste del ovario o viceversa.

Aplastamiento de la S sigmoidea.—Decúbito dorsal: La paciente permanece, después del clisma baritado, en el decúbito dorsal, posición en que [illegible] primer clisé. Por lo gene[illegible] mento de l[illegible]idea, esp[illegible] la exploración especial del árbol urinario.

(b) *Tumor extrarrenal*—La integridad de la pelvis y los cálices en primer término, autoriza, en principio, afirmar el origen extrarrenal del tumor; empero, es justo reconocer, que en la inmensa mayoría de los tumores retroperitoneales, independientes del riñón, la vía excretoria del órgano está por lo menos dilatada; esto último es el exponente de un cierto grado de estasis por compresión externa.

En segundo término, el desplazamiento renal y la torsión de alguno de sus ejes, conjuntamente con el rechazo del uréter, serán muy tenidos en cuenta, por cuanto fundamentan, con frecuencia, el diagnóstico de tumor extrarrenal. Se ha estimado en un 72,5 por ciento la frecuencia con que los tumores retroperi- eales desplazan el riñon o el uréter o os a la vez (Schulte y Emmett). Hay, de luego, observaciones excepcionales, particularmente de grandes quistes del lóbulo derecho del hígado, capaces de desplazar el árbol urinario superior hacia el lado opuesto (Cifuentes); con más frecuencia se consignan discretas modificaciones, tanto en la posición del riñón, como del uréter (observación personal). Por lo demás se tendrá también presente en la discriminación el posible desplazamiento renal, semejante al ocasionado por masas retroperitoneales, producido por tumores del bazo, abscesos subfrénicos desviaciones de la columna vertebral y adherencias perinefríticas (Muschat y Edeiken).

En los pequeños tumores de las cápsulas suprarrenales, el enfisema perirrenal (Carelli) es decisivo y concluyente para afirmar el origen verdadero del proceso.

SUMARIO

El autor señala el clásico concepto de tumor abdominal, situado clínicamente entonces desde un ángulo estrictamente anatómico, para recalcar la importancia actual de los últimos adelantos aportados por la radiología—tránsito gastrointestinal, colecistografía, pielografía, neumorradiografía—que exigen una definición más amplia y precisa, pero haciendo la observación de que si bien la radiología ha contribuído en los últimos tiempos, más que ningún otro método, al reconocimiento y estudio de los tumores abdominales, no substituye en absoluto a los medios de exploración exclusivamente clínicos. Hace notar la conveniencia de no atenerse solamente con fin diagnóstico a la descripción esquemática de los clásicos, dado que únicamente la asociación armónica de los datos suministrados por la clínica, el examen de los rayos X, combinado a las substancias de contraste, conducirán al diagnóstico topográfico exacto del tumor.

Enuncia que gracias a la clínica y la radiología, se precisa el alcance que debe dársele al concepto de tumor, prescindiendo aparentemente de su naturaleza y de todo factor causal, aun cuando teniendo en cuenta que el diagnóstico topográfico incluye tácitamente el diagnóstico etiológico, por cuanto una y otro son inseparables. Da a este capítulo de la clínica la denominación de "oncoquiliagnosis," que aprecia como sintética, justa y apropiada, después de ocuparse etimológicamente del asunto. Por fin, expone que en esta rama de la clínica juegan papel preponderante los estudios del tránsito gastrointestinal y renoureteral, desarrollando su trabajo a este respecto para fundar, utilizando la radiología en auxilio o colaboración de la clínica, el concepto de tumor abdominal u onquiliagnosis.

RÉSUMÉ

L'auteur discute le diagnostic différentiel des diverses tumeurs qu'on rencontre dans la cavité abdominale. Il faut se prévaloir des différents aides du laboratoire afin d'établir un diagnostic pré-

cis pré-opératoire. La radiographie parfois nous trompe. Néanmoins elle fournit de précieux renseignements et doit être employée ainsi que tous les autres procédés. L'auteur emploie le terme "*oncoquiliagnosis*" pour désigner les divers procé dés pris ensemble dans la méthode qu'il préconise.

Tratamiento Preventivo para Evitar las Maloclusiones Dentarias

(Preventive Treatment of Dental Malocclusions)

JOSE J. ROJO
MEXICO, D. F.

SUMMARY

This is a contribution to save humanity from the surgical reduction in the extreme cases of anomalies of Angle's Class III. "To prevent a monstrosity is better than the most wonderful surgical operation."

Attention is called to all the surgeons of the world and those in education and public health work to the greater attention given temporary teeth of children from three to six years of age, a period in which the great regional anomalies of the teeth are clearly manifest, in order to take advantage of the valuable opportunity of the histologic constitution of the bones at that age and the great toleration on the part of the children for active treatment, to be able to leave the permanent teeth and adjoining tissus uninjured, favoring the normal development of the child in the most opportune age.

Orthodontia on temporary teeth will not be carried out with the fundamental purpose of correcting the temporary teeth, but to prevent the anomalies of the permanent ones.

FORMANDO parte de la Delegación de la Federación Dental Nacional Mexicana, vengo ante Udes. hoy con todo el respeto y la devoción que nuestra Agrupación guarda para estas reuniones.

Hago presente mi gratitud al Comité Organizador por haberme concedido el honor de usar la Tribuna Int [illegible] de esta A [illegible] s id

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*Presented at the Third International Assembly of the International College of Surgeons held in Mexico City, August, 1941.

se expongan, buenas a malas serán escu-
chadas en el mundo, y esta idea me hizo
hacer el esfuerzo necesario para venir
a exponer aquí mi experiencia, ya larga
de más de 40 años, sobre un punto con-
creto, pensando que podrá, tal vez, servir
a mis Colegas Nacionales y a otros espe-
cialistas del mundo, animado también
por mi vieja convicción de que hay que
cumplir con el deber, en los Congresos
Médicos los que en último análisis son
para bien de la humanidad.

Señores Congresistas, qué hermoso
sería poder evitar por medio de "regla-
mentos," las enfermedades y que nadie
muriera; no llega mi ilusión a ese grado,
y no pienso que podamos en lo porvenir
y como resultado de este modesto tra-
bajo, evitar que ni un solo niño tenga
maloclusiones, y sí creo que desgra-
amente, muchos millares de niños,
irán llegando con sus permanentes
nalos y tendremos todos los Ortodon-
stas del mundo que prestarles nuestros
mejores servicios, para enfrentarnos
con los maravillosos recursos de la Orto-
doncia y resolver problemas de hecho
perniciosos.

Pienso, no obstante, y por eso estoy
ocupando unos minutos de vuestro pre-
cioso tiempo, que se debe hacer una cam-
paña tenaz y extensa en el mundo, para
que los Higienistas, los Gobiernos y los
Sabios Maestros Especialistas, pongan
mayor y mucho más atención, para estu-
diar y cuidar los dientes temporales;
y, si, como yo lo vengo diciendo y hacien-
do, operamos a temprana edad en los
dientes temporales, conseguiremos así,
que millares y millares de dientes perma-
nentes, hagan una erupción normal, evi-
tando hasta donde lo humano lo permite,
los grandes síndromes de las maloclu-
siones dentarias.

Las reglas anatómicas y la literatura
general de la Ortodoncia, se refieren al
individuo adulto y a los dientes perma-
nentes, y yo aquí también me refiero a
los dientes permanentes en maloclusión,
para poder hacer la siguiente interroga-
ción: ¿Cómo evitar las maloclusiones
dentarias?

En la Pantalla, las Figuras 1, 3 y 5
traen a la memoria aquí, lo que son las
malposiciones dentarias de las tres
grandes clases Angle. Admiré las técni-
cas maestras y la habilidad personal
de los interesantes casos presentados
en México hace muy poco tiempo en la
pasada Asamblea Médica Dental por los
Maestros consagrados Norteamericanos,
Padres de la Odontología Mundial, Drs.
Atkinson, Oliver y Wood, y no pude
hacer otra cosa que admirarlos, reco-
nocerlos como verdaderos maestros y
aprenderles muchas cosas en su mara-
villosa exposición de casos, y pude ob-
servar que todos estos notables casos
presentados, eran referentes a trata-
mientos magistrales sobre dientes per-
manentes.

Hace poco la mamá de un cliente me
consultó si habría inconveniente en es-
perar unos días para hacer un tratamien-
to, hasta oír la opinión de los especialis-
tas de la Madre Europa, aprovechando
la circunstancia de que dos niñas de su
amitad que se encontraban en iguales
condiciones dentarias de su hijo, salían
en viaje para consultar especialistas
renombrados. Después de algunos meses
llegó la noticia de que los especialistas
opinaron que sería conveniente esperar
la salida de los dientes permanentes,
para poder emprender el tratamiento sin
riesgos de "suposiciones" respecto al
grado de anomalía, así como poder con-
tar con "sujetos" para poder operar.

Manifesté a mi distinguída cliente, que
yo difería completamente; y habiendo
aún dientes de leche, emprendimos el
tratamiento del niño y se llegó al resulta-
do que me honro exponer ante Udes. en
la siguiente proyección (Fig. 7).

Mi inolvidable amigo el eminentísimo
finado Dr. Trumán W. Brophy de Chi-

ago, Presidente de la FDI en su hon-osa visita a México recuerdo que nos lijo en una conferencia, que cuando lanzó l mundo Científico su teoría, junto con ran número de niños operados de paladares bífidos, hubo de recibir críticas y rueles recriminaciones por su teoría, le operar en la más tierna infancia, ontrariando la teoría Científica Universal de su tiempo, de que era necesario sperar a cierta edad para que el niño tuviera fuerza para resistir la operación; más después, este sabio maestro fué uno de los más ovacionados y de los más grandes sabios del mundo por su atrevida teoría.

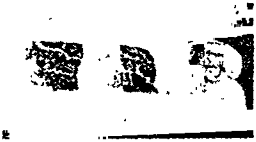

Fig. 1. Malposiciones dentarias de las tres grandes lases Angle.

Fig. 2. Tratamiento preventivo sobre dientes de eche antes y después.

(Pantalla) vemos en la figura 1 un grupo de los miles que hay de la clase I.

En la Figura 2 vemos el molde de antes y después, demostrando un tratamiento preventivo sobre dientes de leche. A esta niña se le aplicó solamente el "aparato inter-canino" inferior que ya he descrito en otra ocasión.

En la Figura 3 vemos un grupo de anomalías de la clase II. En la Figura 4 vemos los moldes de antes y después de un tratamiento preventivo en dientes de leche, practicado a los 5 años de edad con aparato de elásticos inter-maxilares. Se ve en el modelo de la izquierda que dos años después del tratamiento, no hubo recidiva, pues la deformación regional quedó contenida y los dientes permanentes comienzan su erupción en el más perfecto orden.

La Figura 5 nos recuerda la fantástica clase III de Angle y la Figura 6 el resultado de un tratamiento preventivo en los temporales a los seis años de edad, tratamiento que evidentemente detuvo el fantástico prognatismo de la mandíbula que se advierte con claridad indiscutible en el modelo original; en el siguiente modelo se ven los cuatro incisivos superiores ya en oclusión correcta, requiriendo solamente un pequeño acomodo con un aparato auxiliar para perfeccionar el tratamiento; pero no cabe aquí duda respecto a que la anomalía progresiva espantosa, a la que habría llegado esta niña si no se le hubiera impartido atención oportuna, quedó definitivamente contenida a tiempo, y es fácil suponer

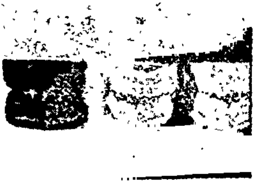

Fig. 3. Anomalías de la clase II.

Fig. 4. Moldes [illegible] y [illegible] de [illegible] miento preventivo [illegible] d.

para las personas que están familiarizadas con estos casos, que el desarrollo armónico de los dientes, de los maxilares, de la cara y en general del cráneo, continuará su camino correcto, con gran satisfacción para los padres, y no menos honda satisfacción para la ciencia y en particular para la ortodoncia que demuestra evidentemente con estos casos, servir a aquellas criaturas que estánamenazadas de males graves de consecuencia incalculable.

Ya ha pasado a la historia la época en que era necesario hablar de la conveniencia de fundar en las escuelas, cátedras autónomas de ortodoncia; igualmente ha pasado la época de justificar la fuerte inversión de valores necesarios para realizar una operación de ortodoncia, pues hoy, todo el mundo reconoce [illegible] grande necesidad en relación con el [illegible]eficio que prodiga, respecto a su ac[illegible], ya no digamos estética para evitar monstruosidades físicas y complejos de inferioridad, sino para evitar enfermedades gingivales y caries, así como hacer que se cumplan fielmente las grandes funciones masticatoria, respiratoria, de dicción, y, por ende, como lo más importante, normalizar la estructura anatómica de las arcadas dentarias y de los maxilares, trayendo como consecuencia inmediata la normal masticación, la

Fig. 5. Nos recuerda la fantástica clase III de Angle.

respiración debida y en general la propia estructura y funcionamiento de los huesos maxilares y de sus principales vecinos inmediatos; el etmoides y el esfenoides, y sus acciones benéficas en la masticación, nutrición, respiración y psíquicas, que en general mejorarán el organismo, para permitirle llegar a la edad adulta con desarrollo y salud normales y por consecuencia con el máximo de aptitudes.

Fig. 6. El resultado de un tratamiento preventivo en los temporales a los seis años de edad.

Fig. 7. Tratamiento del niño y habiendo aún dientes de leche.

Creo ver tan claro como la luz del día, y pido que otros ortodontistas lo confirmen o lo refuten, que, examinando cuidadosamente los dientes temporales, se encuentran claramente manifiestas las "venideras anomalías" de posición de los dientes permanentes y, con gran exactitud se advierten desde los primeros años, las fantásticas anomalías regionales de las clases I, II y III; por lo tanto estimo, que si estas aseveraciones son ciertas, como consecuencia natural, se impartan los tratamientos preventivos preconizados en este trabajo.

Por otra parte, hay que pensar en la enorme diferencia histológica de los huesos de las edades tempranas, los que, por su suavidad hacen más llevaderos y facilitan grandemente los esfuerzos mecánicos necesarios. La adaptación y tolerancia de los niños para los aparatos, en mi prática he podido observar que en los de seis años es excelente, cuando no mejor, que en los niños mayores. Además, es evidente la ventaja de no tener que remover, ni tocar los dientes permanente, aplicando y adjustando bandas, ligaduras y toda la múltiple gama de aparatos y las fuerzas necesarias de acción sobre tejidos, ya dentarios o sus adyacentes, para que, por grande que sea la habilidad del operador, su acción nociva, lesione los dientes temporales que van a caer pronto, dejando indemnes a los permanentes.

Seguramente que este tema debería ocupar para su desarrollo completo mucho tiempo, del cual se carece en este Congreso, dada la enorme cantidad de trabajos que en plazo cortísimo tienen que presentarse; y con esta idea al frente, tengo que privarme de entrar en largas consideraciones y explicaciones detalladas, mas creo que con las apuntaciones expuestas, será bastante para despertar un nuevo interés en los investigadores científicos de la Ortodoncia, a fin de que fijen su mirada más detenidamente en los dientes temporales. Para procurar que esta idea se realice, paso a expresar en forma de conclusiones los siguientes puntos, para que la H. III Asamblea Internacional de Cirujanos, resuelva si los toma en consideración patrocinándolos para promulgarlos en forma de "resoluciones."

CONCLUSIONES

1. Que los dientes temporales de los niños sean reconocidos del primero al decimo cuarto año de edad, cada seis meses: (a) desde el punto de vista general; (b) desde el punto de vista ortodoncico.

2. Practicar tratamientos preventivos ortodoncicos. En los dientes temporales, más o menos a los seis años de edad.

SUMARIO

Contribución para salvar a la humanidad de la reducción quirúrgica en los casos extremos de las anomalías de la clase III de Angle. "Evitar una monstruosidad, es mejor, que la operación quirúrgica más maravillosa."

Se llama la atención a los Cirujanos del Mundo, y a los Jefes de los Servicios de Asistencia, Educación y Salubridad Pública, para que fijen su mirada con mayor atención en los dientes temporales, de los tres a los seis años de edad, época en la cual ya están claramente manifiestas las grandes anomalías regionales de los dientes y de los maxilares, para aprovechar la oportunidad valiosa de la constitución histológica de los huesos a esa edad y la gran tolerancia de los niños para los tratamientos activos, sujetando a los temporales a todos los rigores de los tratamientos, para conseguir dejar indemnes a los dientes permanentes y a los tejidos adyacentes, favoreciendo además el desarrollo normal del niño en la época más oportuna.

Los tratamientos de Ortodoncia en los dientes temporales, no llevarán por objeto fundamental, corregir dientes temporales, sino prevenir las anomalías de los permanentes, para evitar así las grandes monstruosidades de los maxilares que tanto afligen a los enfermos, y, en más de una ocasión los obligan a emprender operaciones delicadas, las que, no obstante sus admirables técnicas y sus maravillosos resultados, será no obstante, mejor favorecer el desarrollo del Infante, para evitarles que se encuentren en la triste situación frente al dilema de emprender una operación quirúrgica delicadisíma o resignarse a vivir con una monstruosidad física, con influencias morales, psíquicas, fisiológicas y tal vez hasta patológicas, como las de los casos, por cierto frecuentes, señaladas en las figuras Núms. 3 y 5.

RÉSUMÉ

Contribution pour sauver l' humanité de la réduction chirurgique dans les cas extrêmes des anomalies du genre III de "Angle." "Eviter une monstruosité, vant mieux, que la plus merveilleuse opération chirurgique.

On appelle l'attention des chirurgiens du monde, et des chefs des services d' Assistance, Education et Santé Publique, pour qu'ils fixent leur regard avec plus d' attention sur les dents temporels, a partir de trois á six ans, époque à laquelle sont dejá clairement visibles les grandes anomalies regionales des dents et des maxilaires, afin de profiter la grande occasion de la constitution histologique des dents à cette âge là, et l' énorme tolérance qui ont les enfants por les traitements actifs, sujetant les dents temporels, à tous les riqueurs des traitements, afin de parvenir à laisser indemnes les dents permanentes, et les tissus qui y sont joints, en aidant en plus au développement normal de l' enfant à l'époque la plus oportune.

Ses traitements d'Odontologie dans les dents temporels ne tiendront pas comme principal object de corriger les dents temporels, mais prévenir les anomalies des dents permanentes, pour éviter ainsi les grandes monstruosités des maxilaires qui font tant souffrir aux malades, et qui en plus d' une occasion sont obligés a se soumettre a des opérations très délicates, lesquelles non obstant ses admirables tecniques et ses merveilleux résultants, ne serviront pas assez. Il será toujours mieux aider au développement des enfants pour éviter qu' ils se trouvent dans la triste situation d' être obligés à entreprendre une "Opération Chirurgique," très délicate, ou se résigner à vivre avec une monstruosité physique avec influences morales, physiques, physiologiques et peut-être patologiques, comme dans les cas, vraiment fréquents signalés dans les figures Nums. 3 et 5.

The Barraquer Technic in Incipient Cataract and Glaucoma*

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MANY observing ophthalmologists realize that much visual function is lost by the advice so frequently given to wait for surgery until the cataract is "ripe." We advise our patients that their cataracts can be removed at any time and at any stage, and that there is less danger in immediate removal than there is in waiting for ripening. In many cases, by waiting for the development of incipient cataract, considerable vision is lost from an obscure glaucoma. Our seventeen years of experience with the Barraquer technic leads us to believe that all cases with incipient cataract should be carefully analyzed for glaucomatous symptoms by means of tension tests and field chartings. When tension persists at or above the upper limit, immediate intracapsular cataract surgery should be considered in non-inflammatory cases. This is true even though the lens is only partially opaque.

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*Presented at the Third International Assembly of the International College of Surgeons held in Mexico City, August, 1941.

For inflammatory glaucoma the most frequent routine procedure followed by conservative surgeons has been that of a preliminary iridectomy and, after the inflammation has subsided, the extraction of the cataract. Intracapsular extraction in this way has been quite successful in the authors' hands, but when the problem of cataract extraction comes up following the iridectomy for glaucoma where the surgeon desires a flap or wishes to make a scleral or episcleral corneal suture, the problem of being unable to make a suitable flap arises.

We are more and more impressed that very often the problems of cataract and glaucoma are intimately associated. One must remember that the lens is one part of the human anatomy which never ceases to grow. Cataract or a growing lens can cause glaucoma and glaucoma can cause cataract. Thus the successful conclusion of a case of glaucoma and cataract depends on treatment being directed at both the cataract and the glaucoma simultaneously.

For many years in selected cases of non-inflammatory glaucoma in connection with a partially developed cataract we have been utilizing a surgical procedure which is herein described. It is our routine Barraquer cataract procedure with the addition of a punch sclerectomy and other slight variations. The Barraquer operation with sclerectomy for glaucoma was first reported before the eye section of the Iowa State Medical Society in 1925[1] and to the American Academy of Ophthalmology in 1930 and 1931[2, 3]. As time has gone on we have developed a somewhat improved technic which we believe will enable the surgeon to do an iridectomy and a one-step extraction of glaucomatous cataract with a sclerectomy as one surgical procedure.

It is a well-known fact that lens intumescence is a frequent cause of hypertension. Whether or not these hypertensive cases can be considered as primary or secondary glaucoma remains a debatable question. Many such cases defy exact analysis. Nevertheless, the surgeon is frequently confronted with the fact that reducing the tension by surgery is necessary and he knows that sooner or later along with that he will have to do a cataract extraction. Frequently the Elliot trephine is satisfactory in controlling tension. In other cases an iridectomy will hold the tension in abeyance, but neither can be depended on for any length of time and neither improves vision. Cyclodialysis is an ideal technic if it could be made permanent. Dr. Troncoso's contribution[4] with the magnesium implant has been successful in two cases. We have had several cases which have been successful where we have utilized our Seton technic[5] preliminary to the lens extraction. By these various methods tension may be held in abeyance, but there is no certainty and the patient is not safe from the dangers of hypertensive glaucoma, nor is his vision improved until the cataract is removed surgically. Being strong advocates of the intracapsular extraction in general and the Barraquer technic in particular, we believe in many of these cases surgery can be completed in one stage with the technic herein described. It varies from our regular Barraquer procedure in uncomplicated cataract surgery only in the performance of the sclerectomy. Indications are persistent tension at or above 28 Schiotz or progressive loss of retinal function measured by central and perimetric field-chartings.

After a thorough physical examination by an internist for systemic dyscrasias and infections which are frequently present, the eye examination is made by controlled dilatation with euphthalmine and cocaine followed by miotics befo patient is prepared for surgery. In addition to the usual pre-operative preparation the tear sac is injected with 1:3000 bichloride ointment and the lids are freely anesthetized by 2 per cent novocaine injection, preceded by 4 per cent cocaine instillation. Retrobulbar anesthesia is considered essential in glaucomatous cases as its value in lowering the tension for intracapsular extractions is well established. In non-glaucomatous, low-tension eyes a retrobulbar is dispensed with and 4 per cent cocaine alone is instilled in the anterior chamber instead.

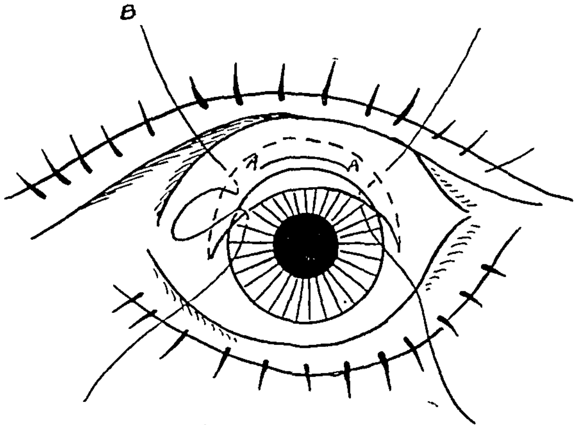

Fig. 1. Dotted line is upper margin of conjunctival flap dissected down and laid over cornea. Heavy line A-A is site of keratome incision made 1½ mm. back of limbus to permit a punch sclerectomy. Corneal section is completed by scissors. Sutures placed beforehand for quick closure after cataract extraction.

A speculum is used for the corneal section and the placing of sutures and is then removed. Lid sutures are placed so that the upper lid is held backwards by means of the sutures and a heavy hemostat hanging back of the head, while the lower lid suture is held downward by the second assistant. In this way the eye can be closed quickly if the patient squeezes or vitreous presents. The conjunctiva is picked up and a conjunctival flap dissected down from about 5 mm. back of the limbus. It is gradually brought around to the 180° meridian on each side, coming up to within 1½ mm. of the limbus (Fig. 1). The episcleral tissue is carefully dissected down to the limbus with a corneal dissector. Two episcleral corneal sutures are inserted with the atraumatic needle at 10:30 and 1:30 o'clock. The corneal section is made by means of a broad keratome. These steps are essentially the same procedure as is used by Dr. Ramon Castroviejo, except that he places three sutures. For glaucoma cases the keratome point is brought back on the sclera about 1½ mm. from the limbus, leaving a place where later a small sclerectomy can be made by means of a Holth punch (Fig. 1 and 4). In cataract cases other than glaucomatous ones the keratome is carried well down into the anterior chamber making as large a section as possible, with care being exercised to avoid cutting the sutures. The keratome is gradually removed, allowing the aqueous to escape as slowly as possible. In glaucoma cases the flap is then closed over the wound for

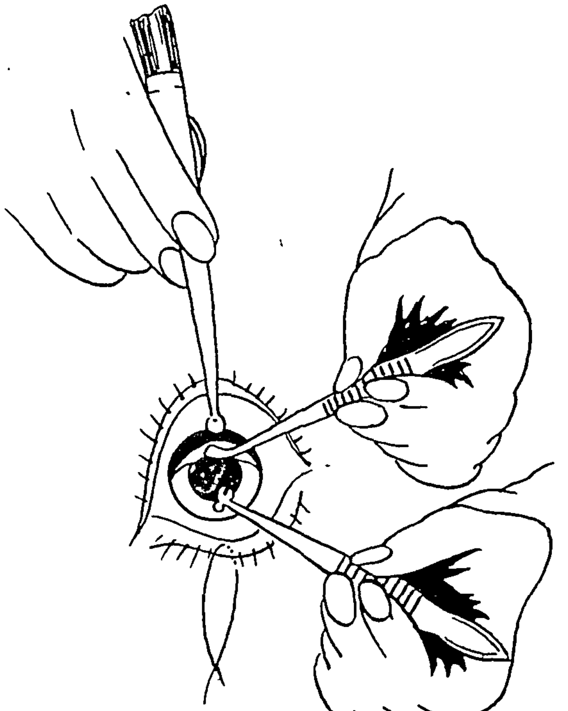

Fig. 2. Corneal section held open by first assistant. Suction cannula placed on center of cataract by direct view. Vacuum applied as counter pressure exerted below to begin dislocation of lens. Lens lifted out by pneumatic forceps (Barraquer).

five to ten minutes to allow the gradual adjustment of tension and of the tissues and the reformation of the aqueous. The corneal section is then completed with scissors. Following this an iridectomy is performed. If profuse bleeding occurs, the operation can be terminated with the iridectomy.

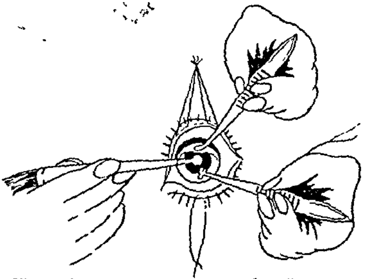

Fig. 3. Lift on cannula not started until maximum vacuum is applied, allowing gradual molding of lens in cup as in Fig. 4. Cannula turned to 180 axis. Cannula rocked back and forth to rupture zonule while counter pressure is continued, following up until lens dislocates from patellar fossa. (*Four lid sutures above hold eye open.*) Lens tumbled in about one-third of the cases.

In the majority of cases, however, the bleeding can be controlled. If much bleeding occurs in the anterior chamber, the patient is given 10 to 15 c.c. of his own blood while on the table. In our entire experience this has been one of the most effective means of absorbing eye hemorrhages. If the patient has high blood pressure and the internist confirms the opinion, 10 to 30 c.c. of blood are frequently drawn from a vein preliminary to the operation, and 10 to 15 c.c. injected intramuscularly.

At this point the suture with the atraumatic needle is passed through the conjunctiva exactly where it joins the cornea. The suture is then looped and a knot tied in the cornea as illustrated (Fig. 2) so that pulling on the two upper sutures immediately pulls the lips of the corneal wound together. If the speculum has not been removed prior to this time, it is positively removed now.

The Barraquer intracapsular extraction of the cataract is then performed, using a minimum vacuum in glaucoma cases and considerable counter-pressure, depending on the maturity of the lens. The greater the maturity of the lens, the less vacuum used. We now never use more than 50 mm. and only 40 mm. for glaucoma cases. The second nurse assistant reads the amount of vacuum being utilized. The amount of vacuum varies from 40 to 50 mm. Hg. Less vacuum is required in mature cataracts. In immature cataracts the maximum of 50 is required. In hypermature types the minimum of 40 is used. The amount of counter-pressure applied by the forceps held in the left hand and applied while the lift is made on the cannula must be varied for the different types of cataract, depending on the amount of sclerosis of the zonule and the strength of the capsule. Ordinarily, th[illegible] cataract, the weake[illegible]

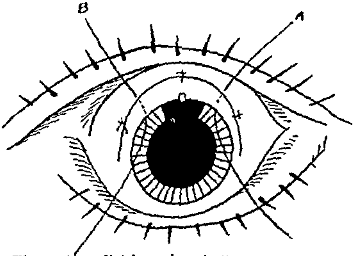

Fig. 4. Immediately as lens is lifted out first and [illegible] A, causing knot B to [illegible] drawn together seconds [illegible] Suture A tied. *Later* [illegible] s are placed and toilet *performed.* Punched sclerectomy under *conjunctival flap shows* at limbus in cases *complicated by glaucomatous* hypertension.

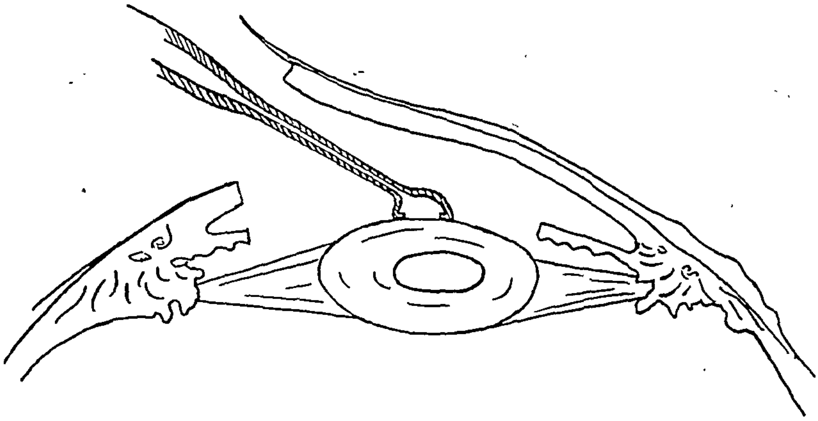

Fig. 5. Vacuum cap in anterior chamber placed evenly on lens capsule. Iridectomy above. (Wolfe—schematic.)

does not always apply. The age of the patient governs it also, but cannot be depended on. Some feeble, elderly patients have very resistant zonules, and vice versa. The surgeon must learn by experience the amount of counter-pressure and vacuum to utilize. We decide the vacuum to be used after the corneal section is made by direct inspection into the anterior chamber.

As the lens begins to dislocate in the patella fossa, the counter-pressure is relaxed and the erisphake cannula rocked back and forth cautiously so that the zonule is ruptured very slowly. The position of the cannula is changed from 90 to 180 and then the lens is tumbled if possible (Fig. 3). This also places the zonular fibers on a twist and ruptures them more readily. Working with the magnifying loup, rupturing of the zonule can frequently be observed when an iridectomy has been performed. This is one of the distinct advantages in having an iridectomy. As the lens delivers, it is followed up by the forceps or hook in the left hand, forcing the cornea and the conjunctiva back in position, and the first assistant pulls on one upper suture (Fig. 1-b) while the second assistant pulls on the other (Fig. 4-a and 4-b). This gives immediate and exact closure of the corneal section. The upper lid is closed down and allowed to remain so for at least ten minutes before the sutures are tied and the toilet performed. The eyes are not disturbed until the third to fifth day, preferably the fifth, after the operation.

COMMENT

We believe that nowhere in ophthalmic surgery is the intracapsular operation more indicated than in cataract and glaucoma. Secondary needlings following extracapsular extraction are frequently prone to precipitate a rise of tension and glaucoma and the patient's best guarantee against secondary glaucoma is an intracapsular extraction. Occasional cases of secondary glaucoma do, however, occur following intracapsular extraction. We have had only a very few develop which were not suggestive of glaucoma at first examination.

The mechanical proposition presented by the taut capsule of the intumescent (unripe) or swollen lens makes it very difficult to grasp by forceps. With the Barraquer technic, this is less of a problem as the lens molds itself by suction into the erisphake cup and the stress in lifting is not altogether on the capsule, as it is with all other forceps (Fig. 6). There is, therefore, far less chance of rupturing the capsule.

The advantages of removing cataracts in the capsule are now generally conceded but the method has been criticized because of the very exacting and difficult mechanics involved. The Barraquer technic is perhaps not the method of choice for the inexperienced or occasional operator. We, however, perform intracapsular extraction in all cases where a corneal section is made. That is, we do not rupture or open the capsule intentionally in any case except in those of soft cataract. Congenital, juvenile, toxic, or other soft cataracts are removed by vacuum (direct suction through a needle cannula). The exacting Barraquer technic is accomplished in our practice by having an operating team of five members, two of whom are experienced ophthalmic surgeons. Three experienced nurse assistants check every detail beforehand. A detailed description has been given by us in several previous essays[6, 7, 8, 9, 10].

We perform the Barraquer technic in many cases by peripheral iridectomy, thereby obtaining a round pupil. This point is decided largely after the corneal section is completed. If the iris is not too rigid and dilates fairly well and the lens is not too large and swollen, the complete iridectomy is dispensed with. There is, however, somewhat more chance of rupturing the capsule and an iridectomy is decidedly favored. We feel that first consideration should be given to removal of the lens in the capsule. The Barraquer technic with iridectomy has no superior in accomplishing intracapsular extraction.

The Barraquer technic is in effect a pneumatic forceps and the lens is lifted out of the eye and is not sucked out. Figure 5 shows the Barraquer erisphake placed on the lens capsule but not yet engaged or held. Figure 6 shows the lens capsule and the lens itself molded and drawn up into the cup of the erisphake and held as with a forceps so that the lens is lifted out. No other type of capsule forceps can so effectively grasp the lens. No vitreous can be sucked out except by exceedingly bungling and inexcusable technic as the lens plugs the vacuum cup. The lens is, therefore, between the cup and the vitreous.

CONCLUSION

Seventeen years of experience and around 3,000 operations by the Barraquer technic have proved that this method offers the patient the quickest path to restored vision. This is particularly true of immature cataract. The patient losing vision from cataract need not wait for ripening to have surgery. Our

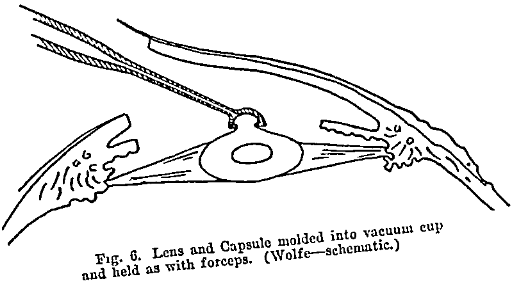

Fig. 6. Lens and Capsule molded into vacuum cup and held as with forceps. (Wolfe—schematic.)

rule is to remove the cataract if it bothers the patient in any way or interferes with his vocation or his pleasures. There is absolutely no need to wait. Not only is there no increase of hazards with the exacting technic, but in ultimate results there is less. Often the patient and sometimes the physician attribute the loss of vision to the cataract when actually glaucoma, chorioretinitis, or other pathologic conditions, particularly nerve involvement, are at fault and are overlooked because of the opaque media. With the cataract removed, the fundus can be viewed and treatment instituted to conserve retinal function. Many cases of glaucoma are actually checked or cured by the removal of the cataract. If the retina has not been materially damaged by the glaucoma, this surgery brings to the patient the joy of fully restored vision. If glau- [illegible] and cataract co-exist (sometimes [illegible] beginning cataract) surgery other [illegible] intra-capsular cataract extraction does not permanently solve the problem. Cataract extraction by the modified Barraquer method will frequently abate the glaucoma and permanently restore vision.

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SUMMARY

Incipient cataract and glaucoma are frequently closely allied conditions. The crystalline lens is one part of the body that never ceases to grow and lens intumescence or swelling frequently causes increased intra-ocular pressure. Intracapsular lens extraction is often indicated in lenses not highly opaque to check glaucoma. There is great danger of glaucoma developing while waiting for a cataract to "ripen." With the Barraquer technic, it is not necessary to wait for "ripeness." The addition of a punch sclerectomy increases its value in controlling high tension. Experience in three thousand cases of cataract extraction by the Barraquer intracapsular technic demonstrates that symptoms of glaucoma are more frequently abated than with any of the extracapsular methods.

SUMARIO

Con frecuencia son concomitantes la catarata incipiente y el glaucoma. El cristalino nunca deja de crecer, y la tumefacción de él hace que se aumente la presión intraocular. A menudo conviene la extracción intracapsular del cristalino, aun cuando éste no sea muy opaco, para contrarrestar el glaucoma. Se corre mucho riesgo de que se presente el glaucoma mientras se espera hasta que "se madure" la catarata. Empleando la técnica de Barraquer no es preciso esta espera. Para corregir la crecida tensión intraocular, es útil ejecutar además la esclerectomía. La experiencia tenida con 3000 extracciones de cataratas, según la técnica intracapsular de Barraquer, enseña que los síntomas de glaucoma desaparecen con más frecuencia que cuando se emplea cualquiera de los métodos extracapsulares.

RÉSUMÉ

Au début la cataracte et le glaucome sont fréquemment associée. La lentile crystalline est une partie du corps qui ne cesse jamais de s'accroître et l'intumescence et le gonflement du crystallin

très souvent déterminent une augmentation de la pression intraoculaire. L'extraction intracapsulaire du crystallin peu opaque est souvent indiquée pour empêcher le glaucome. Le danger qu'un glaucome surgissent en attendant "le maturation d'une cataracte est grand. Avec la technique de Barraquer il n'est pas nécessaire d'attendre la maturation." L'addition d'une sclerectomy au poincon aide à contrôler la haute tension. L'expérience de trois mille extractions pour cataractes par la méthode intracepsulaire de Barraquer démontre que les symptômes du glaucome sont plus fréquemment contrôlés par cette méthode que par aucune méthode extracapsulaire.

Tratamiento Quirúrgico de la Ptosis Mamaria*

(Surgical Treatment of Mammary Ptosis)

RAMÓN PALACIO POSSE, M.D.
BUENOS AIRES, ARGENTINA

SUMMARY

The author presents a new technic for the treatment of mammary ptosis. He points out that necrosis of the areola and skin is avoided by following this method.

CON la presente communicación, deseo contribuir al estudio del tratamiento quirúrgico de la ptosis mamaria, describiendo un nuevo método puesto en práctica por el autor en más de doscientos casos operados en Buenos Aires, Argentina.

Previo al empleo del mismo he tenido oportunidad durante varios años de experimentar la mayoría de las técnicas conocidas, todas las cuales tienen naturalmente sus ventajas e inconvenientes, con sus inevitables porcentaje, más o menos grande, de riesgos operatorios en lo que atañe a la vitalidad de la areola y mamelón. El método que voy ahora a presentar ofrece los mejores resultados sin ningún peligro de necrosis.

No hablaré de la anatomía y fisiología de la glándula mamaria, como tampoco de la etiología de la ptosis; considerando que estas cosas son ya bien conocidas por los cirujanos y especialistas.

TRATAMIENTO PRE-OPERATORIO

Efectuados los usuales analisis, recomiendo a la paciente una ligera dieta dos dias antes de la operación, dando preferencia a los hidratos de cárbono; indicándole también, en la víspera, vaciar el intestino grueso con un enema. La noche antes del acto operatorio les aconsejo acostarse temprano y tomar una o dos pastillas de veronal sódico o un sedativo similar para proporcionales un sueño tranquilo, anulando toda excitación; medicación que se repitirá antes de concurrir a la Clínica. Una hora antes de la intervención, inyectan una ampolla intramuscular de Escofedal Merck (Eucodal, escopolamina, efetonina) dosis fuerte, y mientras ésta actue, hago el trazado del plano operatorio con lápiz dermográfico.

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*Presented at the Third International Assembly of the International College of Surgeons held in Mexico City, August, 1941.

La desinfección de la piel la practico con una solución de dos partes de alcohol a 90° y una parte de tintura de iodo o con alcohol pícrico, teniendo cuidado naturalmente de no borrar dicho trazo.

OPERACIÓN

La operación la realizo en un sólo tiempo, usando siempre la anestesia local, Novocaina al 0,25 gramos por ciento con algunas gotas de adrenalina, previa la ampolla de Escofedal. Por este método he tratado quirurgicamente ambos senos sin tener que recurrir a la anestesia general en ningún caso.

Subdiviendo la operación en cinco os se puede describir más facil- te el método puesto en práctica, en os los casos de ptosis mamaria.

(1) La anestesia es aplicada superficialmente a la piel y consecutivamente la epidermis de esa sección es retirada. El objeto de esta maniobra es asegurar en grado maximo la vitalidad de la areola y mamelon, conservándoles no sólo la irrigación profunda sino también—y esto es a mi modo de pensar y experiencia el punto más importante—la irrigación y enervación superficial, representada por la total conservación del dermis con sus vasos y nervios.

(2) La anestesia profunda de la glándula es aplicada, después de lo cual la glándula se divide en dos segmentos, por una incisión que llega hasta la fascia pectoral; al mismo tiempo se hace el ojal para la implantación de la areola.

(3) La mayor parte del segmento superior de la glándula es vaciada, y por medio de dos o tres puntos de seda o de catgut cromado el segmento inferior previamente MODELADO, es fijado a la fascia pectoral y a la pequeña porción central restante del segmento superior. Séame permitido insistir en este modelaje quizas lo único dificultoso y que tanta importancia tiene para el buen resultado estético y para evitar un retoque ulterior; es en él donde la habilidad, experiencia y gusto artístico del cirujano se pone de manifiesto.

(4) La aerola es tirada hacia arriba por una pinza que pasa por el ojal, para ser suturada en su nueva posición (dibujo 6).

(5) En el último tiempo de la operación el borde inferior B del colgaje de piel superior es afinado en toda su extensión para ser suturado a nivel a la piel del segmento inferior, linea C. Se coloca un tubo de drenaje en el tercio externo de la linea de sutura, el cual se retira al tercer dia.

Todo el campo operatorio se cubre con Cicatul o con Tulle Gras.

Después de un cuidadoso y compresivo vendaje, la paciente puede regresar a su hogar, donde deberá guardar un reposo relativo durante dos o tres dias.

Las puntadas se empiezan a retirar al décimo dia y se terminan de sacar al duodécino.

VENTAJAS E INCONVENIENTES DE MI MÉTODO

Entre las ventajas citaré las siguientes:

(a) No es necesaria la anestesia general.

(b) La paciente puede regresar a su casa inmediatamente depués de ser operada.

(c) La operación se realiza en un sólo tiempo, lo que representa el minimum de tiempo perdido para la gente que debe ganarse la vida con el trabajo personal.

(d) La glándula permanece solidamente fijada en su nueva posición, después de haber adquirido la forma estética deseada.

(e) El peligro de la necrosis de la areola y los colgajes, desgraciadamente tan frecuente en otros métodos, es eliminado por completo.

Entre los inconvenientes de mi método menicionaré:

(a) La prolongación del tiempo operatorio, tres horas y a veces más.

(b) Esta técnica necesita un gran caudal de habilidad operatoria, que sólo se consigue con la continua práctica de la cirugía estética.

SUMARIO

Este trabajo representa una técnica quirúrgica completamente nueva y original para el tratamiento de las ptosis mamaria, con la importante ventaja de que el peligro de necrosis de la areola y los colgajos, tan frecuente en otros métodos, es eliminado por completo.

RÉSUMÉ

L'auteur presente une nouvelle technique pour le traitement de la ptose mammaire. Il démontre que par l'emploi de sa méthode, en évite la nécrose de l'aréole et de la peau.

Tratamiento Pre- y Post-Operatorio Seguido en el Hospital de Aguadulce, desde 1932, hasta el Año de 1941, en Casos de Cirugía Abdominal*

(Pre- and Post-Operative Treatment Followed in the Aguadulce Hospital from 1932 to 1941)

RAFAEL ESTÉVEZ
PANAMA

SUMMARY

The author presents the routine pre- and postoperative treatment, with the following results:

1. Use of luminal instead of morphine, obtaining a quiet sleep and avoiding tympanitis.
2. Early rising, producing elimination, improving the condition of the tissues and accelerating healing.
3. Avoiding the empty spaces by not dissecting the sides of the wound and suturing in one layer only.
4. The exclusive use of nonreabsorbable sutures.

In 4,399 cases he has had only 3 hematomas, 1 disruption of the wound, and 6 postoperative hernias.

DESDE el eño de 1932 se co [illegible] instit [illegible] el [illegible] tal dul [illegible] ati pre- y po [illegible]

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* Presented at the Third International Assembly of the International College of Surgeons held in Mexico City, August, 1941.

1. PREPARACIÓN PRE-OPERATORIA:
   - (a) Enema compuesta de dos onzas de sulfato de manganesia, dos onzas de glicerina y seis onzas de agua, la cual se aplica la noche antes de la operación, salvo que esté contraindicada.
   - (b) Cinco granos de luminal sódico una hora antes de la operación y a falta de éste se sustituye por fenobarbital.
   - (c) Anestesia intraraquídia para la cual usamos clorhidrato de procaína (Abbott) al 10 por ciento en dosis que varían entre uno y dos c.c.; algunas veces hemos usado pentotal sódico en laparatomías de corta duración.
   - (d) Preparación usal del campo operatorio pintando la piel con tintura de yodo al tres por ciento.

2. TRATAMIENTO POST-OPERATORIO:
   - (a) Bolsa de hielo sobre la herida.
   - (b) Cinco granos de luminal sódico doce horas despües de la operación, que se repite no menos de seis horas después si fuese muy necesario.
   - (c) El paciente se levanta a las veinticuatro horas de operado en casos de apendectomía y el noventa por ciento de los operados de laparatomías de otra índole se levantan entre el segundo, tercero y cuarto días, según el estado de cada paciente y la magnitud de la operación; generalmente ningún paciente quedo acostado después del cuarto dia.

En todos los casos la pared abdominal es suturada con puntos interrumpidos de crin de florencia, abarcando todo el espesor de la pared abdominal, incluyendo el peritóneo. Desde julio del presente año hemos principiado a usar hilo de crochet para reemplazar la crin de florencia (mas elástico y muy económico).

Se ha eliminado las suturas del peritóneo y de la facia con catgut. Varias razones motivaron para adoptar nuestro método de sutura. Frecuentemente se encuentra pacientes que tienen una marcada alergia para el catgut con resultados inflamatorios de los tejidos heridos y algunas veces con reacción sistemática general (alérgica); en otros casos, el catgut es absorbido antes de tiempo, dado lugar a disrupción de la incisión abdominal con los consecuentes resultados de eventración del contenido intrabdominal mas la infección subsiguiente.

Al suturar la pared abdominal en tres planos hay más oportunidad de dejar espacios muertos independientes que traen como resultado hematomas y hernias post-operatorias, además de aumentar la posibilidad o riesgo de infección que se colectaría y encerrarían en dichos espacios muertos independientes.

El tiempo que se consume en suturar la pared abdominal, usando nuestro sistema, es mínimo y elimina gran parte del riesgo operatorio por choque, manipulación prolongada del peritóneo etc., y nos permite terminar hasta la última puntada con el paciente gozando de anestesia completa.

Al hacer la incisión cortamos directamente desde la piel hasta la facia, separando las fibras musculares en su propia dirección hasta llegar a la facia posterior y peritóneo, haciendo la menor disección posible entre plano y plano para evitar espacios muertos.

OBSERVACIONES:

El efecto producido por la dósis de

luminal que se administra antes y doce horas después de la operación es él de un sueño tranquilo que dura entre 24 y 48 horas; es decir, el tiempo necesario para que los dolores agudos post-operatorios desaparezcan; además no se produce estásis intestinal. Con el uso de morfina antes y después de la operación, tenemos todo lo contrario, es decir, marcada timpanitis debido a estásis intestinal, retención de orinas y muchos operados no pueden eliminar cuando están acostados en sus camas; ésto no es debido a defecto funcional sino más bien a un efecto psiquico; si estos casos son sometidos a catetarización se corre el consecuente peligro de una infección de las vías orinarias y fiebre instrumental, aumentando así la toxémia e incomodidades del paciente que prolongan su convalecencia.

Hemos podido observar que el 95 por ciento de los casos que no pueden eliminar acostados, a los cuales se les ordena que se levanten, orinan y defecan perfectamente bien sin someterlos a cateterización, enemas, uso de drogas como Pitresina, uso de tubo rectal, que resulta tan incómodo sobre todo con pacientes mujeres.

Al levantar al paciente temprano, la posición vertical parece influir en mejorar la circulación local de los tejidos en reparo de la incisión abdominal; la cicatrización es más rápida que en el paciente permanece acostado durante diez o catorce dias. Además las fibras de los músculos heridos principian a trabajar temprano en su propia dirección y recobran más pronto su tono normal. El hecho de levantar a los pacientes temprano causa en ellos un efecto mental favorable.

Las observaciones apuntadas se basan en 3,499 casos operados desde 1932 a 1941, este último año excluído; en todos ellos se ha usado la sutura abdominal arriba descrita y han sido sometidos al tratamiento pre- y post-operatorio arriba notado. Este grupo incluye:

Apendectomías
Salpingectomías
Colicistectomías
Colecistotomías
Histerectomías abdominales
Herniotomías abdominales
Cesareas
Suspensiones uterinas
Abscesos del hígado
Excisión de tumores varios del abdomen
Resección de intestino con anastomosis del mismo
Gastro-pexias.

En cuanto a lo que se refiere a sutura de la pared abdominal anotaremos que hernias inguinales y prostatectomías requieren una técnica de sutura distinta, sobre todo en las primeras, en las cuales es imperativo hacer una restitución anatómica de tejidos en los cuales fuerzas extrañas al bisturí del cirujano han obrado una disrupción. En cuanto al tratamiento pre- y post-operatorio, hemos seguido la misma rutina ya anotada.

Entre los 4,399 casos han resultado: tres hematomas; una disrupción de la herida, debido a que se usó crin de florencia sumamente delgada, y seis hernias post-operatorias. No se ha registrado caso alguno de embolia o choque operatorio.

CONCLUSIONES

(1). Con el uso del luminal sódico, en dósis de cinco granos, administrado una hora antes y doce horas después de la operación, por su acción hipnótica, cedante y hasta cierto grado anodina, se concede al paciente suficiente confort post-operatorio, se evita los trastornos consiguientes de la administración de morfina y se acelera su convalecencia.

(2). La sutura, en *masa*, de la [illegible]
abdominal el [illegible] a la [illegible] compli [illegible]
que resulta [illegible] uert [illegible]
tornos alé [illegible] ex

se acelera la reparación de los tejidos cortados y por su puesto, también se acelera la convalecencia del paciente.

(3). Al levantar al paciente temprano se consigue mejor eliminación, se disminuyen las toxémias post-operatorias; también se acelera la cicatrización y se acorta el período de convalecencia con resultados de que la hospitalización y período de incapacidad del paciente son notablemente acortados.

SUMARIO

El autor presenta una rutina con las características siguientes:

Uso de luminal en vez de morfina, consiguiendo un sueño tranquilo y evitando timpanitis.

evantada temprano, produciendo eliación, mejorando las condiciones de s tejidos y acelerando la cicatrización.

Evitar los espacios muertos al abrir, y suturar en un plano.

Usar solo hilo no reabsorbible.

Dice que en 4,399 casos solo ha tenido 3 hematomas, 1 disrupción en la herida y 6 hernias post-operatorias.

RÉSUMÉ

L'auteur présente une routine donts les caractéristiques principales sont:

Emploi de luminal au lieu de morphine, obtenant un sommeil tranquille et évitant la tympanite.

Lever précoce, produisant l'élimination, améliorant les conditions des tissus et accélérant la cicatrisation.

Eviter les espaces morts en ouvrant; suturer en un plan.

Emploi exclusif de fil non réabsorbable.

Il dit qu'il n'a eu que 6 hématomes, 1 disruption de la plaie et 6 éventrations, en 4,399 cas.

Local Anesthesia in Operations by the Vaginal Route*

ERNESTO R. DE ARAGÓN, M.D.

HAVANA, CUBA

Professor De Aragón presented a paper on "Local Anesthesia in Operations by the Vaginal Route." The summary of his paper follows.

The author has comprised a check-up of 200 surgical interventions by the vaginal route in which he used local anesthesia by infiltration of ½ per cent solution of novocain. The results bear out unmistakably the correctness of our viewpoints, as stated in our communications on "Local Anaesthesia in Plastic Operations on the Vagina," presented at the National Society of Surgery on May 18, 1937.

This study includes hysterectomies, interposition operations, amputations on the cervix, trachelorrhaphies and different vaginal plastic operations. The author explains his technic and attributes his success to three factors: previous preparation, appropriate medium, and successful infiltration.

He maintains that anesthesia by infiltration is the method of choice in vaginal operations in general, and particularly in plastic interventions in view of its better hemostasis, which is indispensable to any surgical technic, due to the denudation and dissection produced by the injection, and preparing easily accessible "planes of cleavage"; for the absolute clearness of presentation of the finest and subtlest anatomic details; and in view of its harmlessness, giving the operator the necessary assurance to proceed calmly without sacrificing a technical detail at a moment's warning.

SUMARIO

El auto reune 200 intervenciones por via vaginal en que empleó la anestesia local—infiltración de novocaina al ½ por ciento—y cuyas intervenciones ratifican las consideraciones hechas en comunicación previa a la Sociedad Nacional de Cirugia (Mayo de 1937.)

Esta estadistica incluye histerectomias, interposiciones utero vesical, amputaciones del cuello, traquelorrafías y distíntas plastias vaginales. El autor describe su técnica y la atribuye al éxito alcanzado a tres factores: preparación previa, ambiente apropiado e infiltración bien hecha.

Sostiene que para la mejor hemostasia, condición inapreciable en toda técnica quirúrgica, por la denudación y disección que la sustancia inyectada provoca, preparando planos de "clivage," fácil y rapidamente abordables, por la absoluta claridad con que se destacan las formaciones anatómicas más tenues e intrincadas, y porque su propia inocuidad permite operar con completa calma, sin sacrificar un detalle de técnica a un minuto de tiempo, la anestesia por infiltración es el método de elección en las intervenciones vaginales en general y muy especialmente en las plastias.

RÉSUMÉ

L'auteur a reuni 200 interventions par voie vaginale, dans lesquelles il a employé l'anésthésie locale—infiltration de novocaïne a ½ pour cent—et dont le résultat ne fait que confirmer pleinement les considérations faites dans une communication prealable à la Société Nationale de Chirurgie (Mai 1937).

Cette statistique comprend des hystérectomies, des interpositions utérovésicales, des amputations du col, des tachéloraphies, et plusieurs autres interventions plastiques sur le vagin. L'auteur décrit sa technique et croit pouvoir attribuer le succés atteint à trois facteurs: préparation préalable, ambiance appropriée, infiltration bien faite.

Par une meilleure hémostase, condition inestimable dans toute technique chirurgicale; par la dénudation et dissection que la substance injectée provoque, en préparant des plans de clivage, facilement et rapidement abordables; par la parfaite netteté avec laquelle sont mises en relief les formations anatomiques les plus estompées et intriquées, et parceque sa propre inocuité permet d'opérer sans hâte, en prenant tout son temps, sans sacrifier un detail technique à une minute de temps, L'auteur croit, que l'anesthésie par infiltration est la méthode de choix dans les interventions vaginales en général et plus spécialement dans les interventions plastiques de cet organe.

La Desarticulación Inter-ilio-sacro Pubica*

(Inter-ilio-sacro-pubic Disarticulation)

DARÍO FERNÁNDEZ FIERRO, F.A.C.S., F.I.C.S.
MEXICO, D. F.

SUMMARY

The author presents his procedure of disarticulation named by him "inter-ilio-sacro-pubic disarticulation," instead of "inter-ilio-abdominal disarticulation." The incision begins 1 cm. above the symphysis pubis and continues parallel to the crural arch and the ilias crest, ending at the superior and posterior iliac spine. Another incision begins at the anterior-superior iliac spine, following the external surface of the greater trochanter, the gluteal ridge and the genito-crural ridge, reaching the point of departure. He describes detachment of the gluteal muscles and section of nerves (sciatic, crural and obturator). He stresses the necessity of injecting novocain locally previous to sectioning these nerves, and points out the importance and value of a ligature of the common iliac artery. Disarticulation of both pubic symphyses and other anatomic structures is described. The author presents a device for supporting the abdominal wall.

HACE tiempo recibí una enferma cuyo estudio hice en mi clase de Terapéutica Quirúrgica, habiendo llegado al diagnóstico de que tenía una sarcoma del fémur y una metástasis en el hueso ilíaco del mismo lado. Después de haber meditado sobre su resistencia vital, y examinado los distintos tratamientos que pudieran estar indicados, llegué a la conclusión de que la desarticulación inter-ilio-sacro-púbica (como creo debe llamarse, en vez de inter-ilio-abdominal) u operación de Billroth-Jaboulay, era el solo tratamiento que podría salvar a la enferma (Fig. 1). Me dediqué a leer el mayor número de libros y revistas para poder documentarme sobre esta operación, habiendo encontrado que la técnica es descrita de una manera tan vaga, que no permitiría lanzarse a operar con solo esos datos. Por todos estos motivos me vi precisado a idear para el caso una técnica de desarticulación inter-ilio-sacro-púbica, que

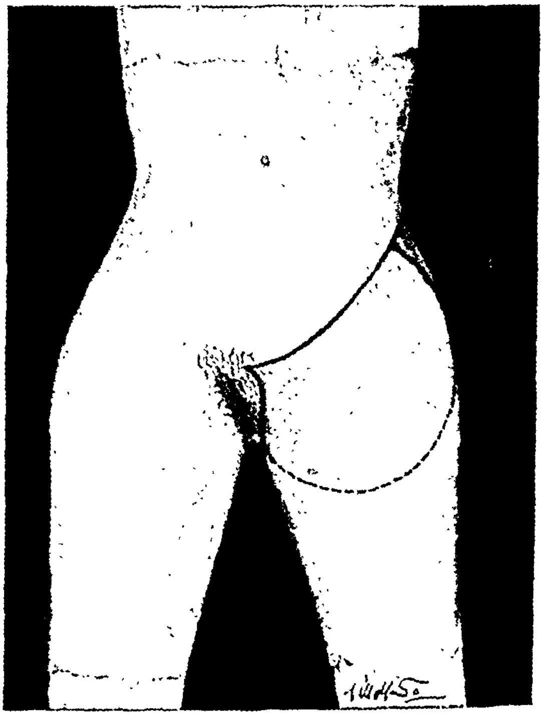

Fig. 1. Incision anterior en la operación de Billroth-Jaboulay.

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* Presented at the Third International Assembly of the International College of Surgeons held in Mexico City, August, 1941.

es la que voy a tener el honor de presentaros.

TÉCNICA DE LA OPERACIÓN

Una incisión (Fig. 2) que partiendo de la sínfisis del pubis unos dos centímetros arriba sigue paralela al arco de Poupart y a la cresta ilíaca hasta el nivel de la espina ilíaca posterior y superior (Figs. 3 y 4).

De la espina ilíaca anterior y superior parte otra incisión que se dirige al trocanter mayor sigue por el pliegue gluteo, luego por el pliegue génito crural hasta su punto de partida. El colgajo es pues posterior. Se dividen todas las partes blandas según la linea paralela al arco y a la cresta ilíaca en toda su extensión, es decir, el tejido celular, aponeurosis, músculos oblicuo mayor, oblicuo menor, transverso, faciatransversalis, hasta llegar al tejido celular preperitonial, teniendo cuidado en el hombre del cordón espermático, en la mujer del ligamento redondo para protegerlos y aislarlos.

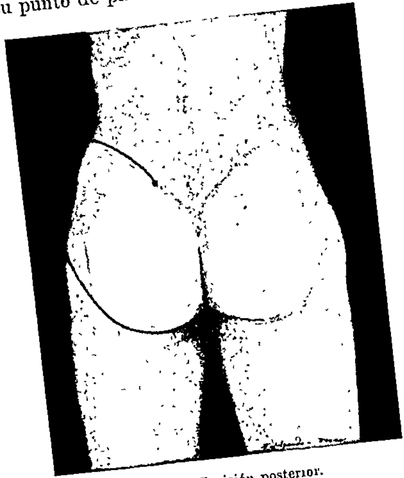

Fig. 2. Incisión posterior.

Durante este tiempo ligar las ramas de la subcutánea abdominal y de la epigástrica, más hacia afuera las ramas de la circunfleja ilíaca. Despegar suavemente y con delicadeza el peritoneo de toda la fosa ilíaca interna hasta descubrir perfectamente y con toda claridad los vasos iliacos, y llegar al tejido celular pelvisubperitoneal (Fig. 5). Queda expuesta perfectamente bien la región para proceder con seguridad a los tiempos siguientes, que son: aislamiento de los psoas y sección en su parte superior, sección de los nervios femorocutáneo y génito crural, aparece el nervio crural hacia afuera y el obturador hacia adentro, los cuales serán seccionados previa invección con novocaína (Fig. 5). En la parte interna se descubren las ilíacas primitivas, arteria y vena y se procede a ligarlas, ya sea temporalmente, si la ligadura de la ilíaca externa y las ramas de la ilíaca interna pueden ir haciéndose [illegible] finitiv[illegible] a medida que se se [illegible] mente, lo cual no

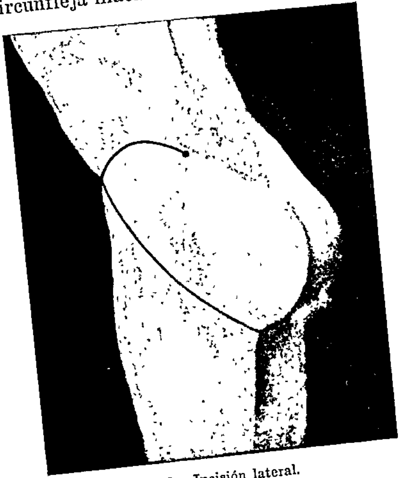

Fig. 3. Incisión lateral.

niente y por lo contrario ventajas. Se liga la ilíaca externa en su extremo distal lo mismo que la obturatriz con el objeto de evitar el escurrimiento de sangre que podría venir del miembro inferior al manejarlo. Se continúa el despegamiento del peritoneo adelante y atrás de la cavidad pélvica, para descubrir perfectamente la región de la sínfisis del púbis y rechazar la vejiga, el paquete intestinal y el uréter. De esta manera quedan perfectamente expuestas la sínfisis del púbis adelante y la articulación sacro-ilíaca en la parte posterior. Se pasa en seguida a trazar el colgajo posterior, para lo cual se dividen la piel y el tejido celular siguiendo una línea que va como ya dijimos desde la espina ilíaca anterosuperior, pasa por la cara externa del trocanter mayo, sigue el surco gluteo y el pliegue génito-crural hasta la sínfisis del pubis. Se dividen en la parte inferior de esta incisión el gluteo mayor, lo cual facilita la continuación de este tiempo y es la sección de los gluteos medio y pequeño, y, piramidal al nivel del trocanter mayor, lo cual se logra contorneando con el cuchillo sus bordes anterior, superior y posterior (Fig. 6). Se hace después una incisión un poco abajo de la cresta ilíaca en toda

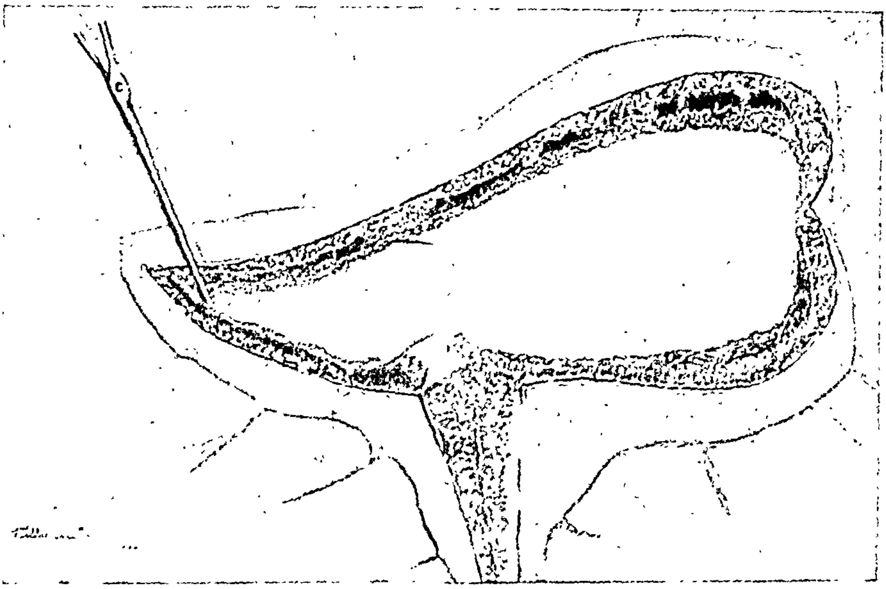

Fig. 4. Incisión de la piel y tejido celular subcutaneo.

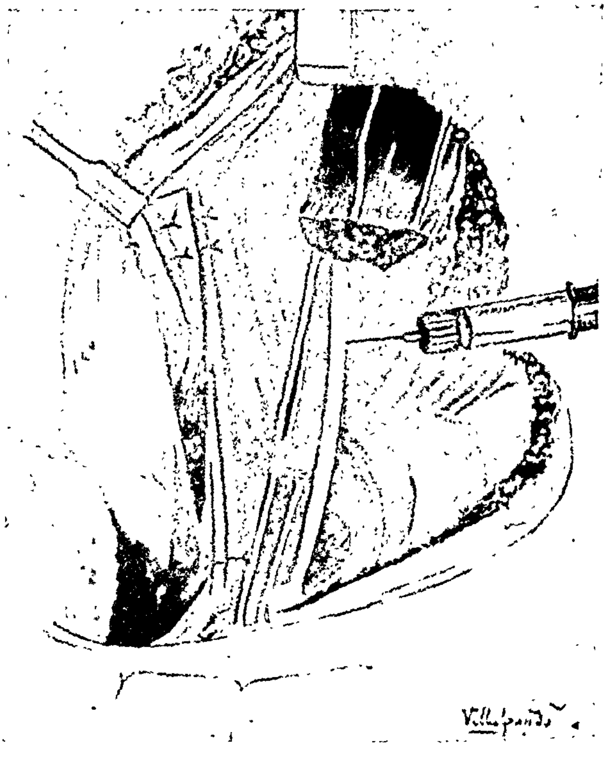

Fig. 5. Aspecto de las planas profundos.

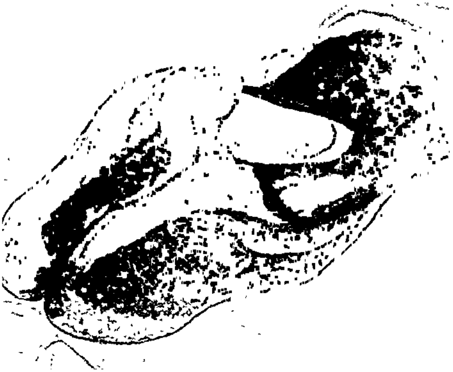

Fig. 6. Después de seccionados los músculos.

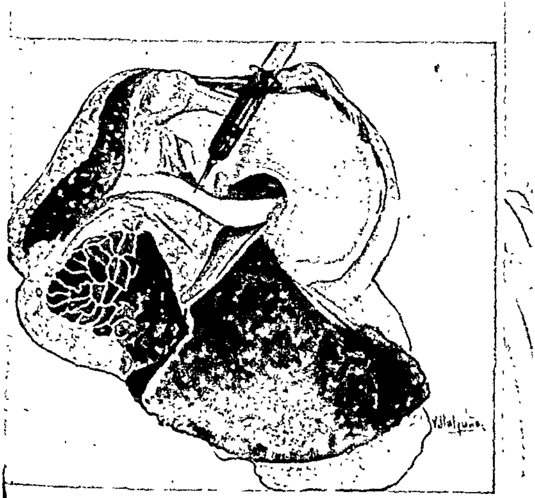

Fig. 7. Inyección del ciático con solución de novocaína.

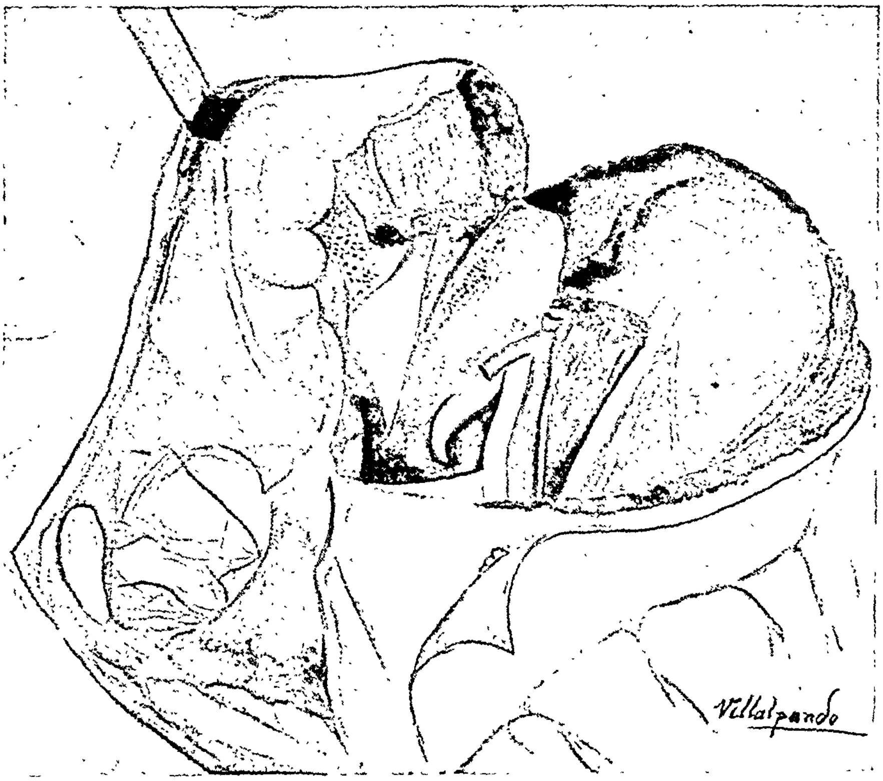

Fig. 9. Desarticutación sacro-ilíaca.

su extensión (Fig. 7), para venir desincertando los músculos gluteos en toda la extensión de la cara externa del ilíaco, borde del sacro, coxis y cara externa del ligamento sacro-ciático mayor, se hacen en este tiempo las ligaduras de los vasos gluteos e isquiáticos que pudieran permitir ver si se podría quitar la ligadura de las ilíacas primitivas o hacerla definitivamente. Se continúa despegando el colgajo y al nivel de la escotadura ciática mayor se separan cuidadosamente los vasos glúteos y ciático mayor, aprovechando seccionar el ciático previa inyección de solución de novocaína.

DESARTICULACIÓN

Se explora cuidadosamente que el despegamiento iniciado ya deje perfectamente libre la sínfisis del púbis, cuidando si de un hombre se tratara, rechazar el cordón hacia adentro lo mismo que el pene y los testículos, y en la mujer el ligamento redondo que si se cortara se

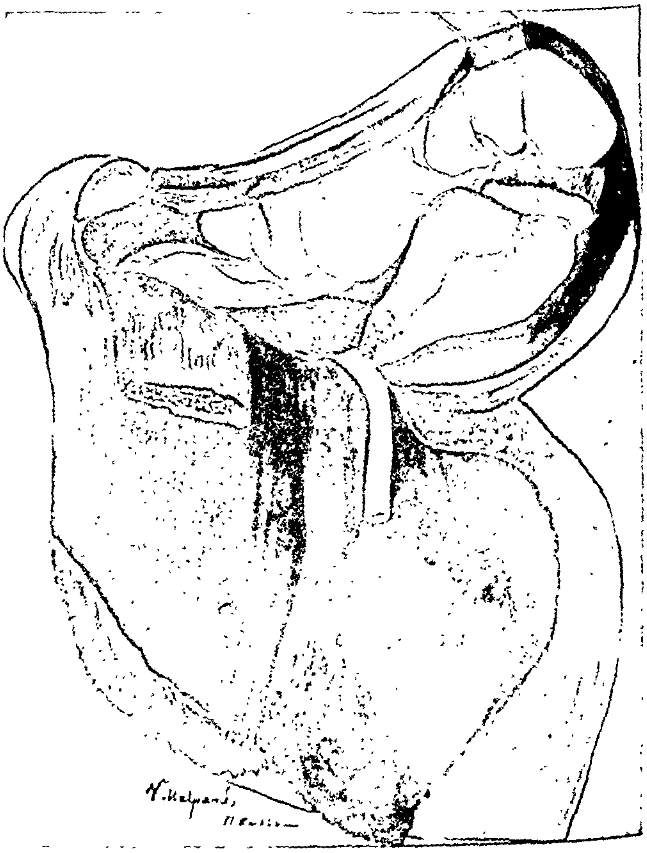

Fig. 10. Vista del colgajo bien acojinado y bien

fijaría a la aponeurosis de los rectos anteriores como si se tratara de la curación de una hernia inguinal (Fig. 8). Se divide la sínfisis del púbis, se ve que se separan los ilíacos, se sigue cortando pegándose a la rama descendente del púbis lo más que se puedo, la hemorragia que pudiera venir se domina fácilmente por la compresión con una compresa, llega un momento en que no pueden separarse más los ilíacos, se dirige uno a la parte posterior de la pelvis, toca uno la sínfisis sacro-ilíaca, se divide el músculo ilíaco, ligando algunos de los vasos de la ilio-lombar y se inicia la desarticulación por su parte posterior, de esa manera se facilita encontrar la interlinea articular, lo cual permite separar un poco más los huesos ilíacos (Fig. 9), aprovechando la mayor separación se continúa dividiendo las partes blandas que falten de dividir, elevador del ano isquiocoxigio, se continúa dividiendo lo que falte de los ligamentos de la articulación sacro-ilíaca y los ligamentos sacrociáticos y todo el miembro inferior se desprende, quedando un colgajo bien acojinado y bien nutrido (Fig. 10).

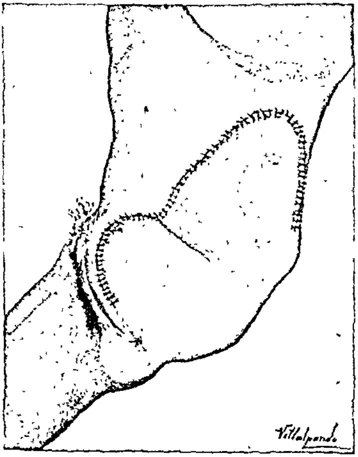

Fig. 11 Aspecto del colgajo suturado.

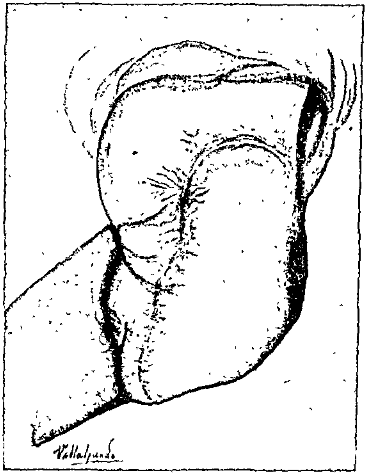

Fig. 12. Después de la cicatrización

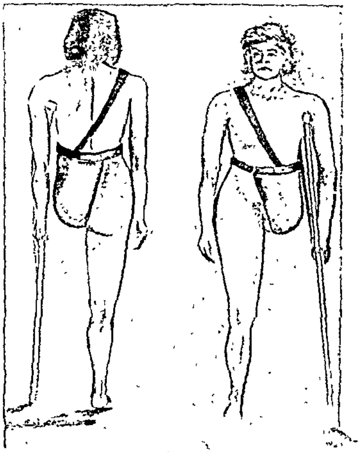

Fig. [illegible]

RECONSTRUCCIÓN

Se suturan los músculos del colgajo con los músculos de la pared abdominal y la piel después, dejando un drain en la parte media del colgajo (Fig. 11).

Las Figuras 12 y 13 muestran el estado actual de la paciente después de la operación.

Siendo el primer caso que he operado, imaginé el siguiente medio para sostener la pared del vientre.

Esta es la técnica de la operación que llamo desarticulación inter-ilio-sacro-púbica y que practiqué el 11 de junio de 1936, a la enferma Josefina R., en el Hospital General, Pab. 15. y que tuvo una sobrevida de año y medio, habiendo muerto de una metástasis pulmonar.

Al terminar de operar, quedé verdaderamente estupefacto, me parecía imposible haberla realizado, y pensaba en a lucha titánica emprendida y victoriosamente terminada, sintiéndome felíz al haber salvado una enferma que, sin hipérbole, para arrancarla de la muerte dí un pedazo de un tranquilidad y de mi vida.

SUMARIO

El Autor presenta su procedimiento para desarticulación, que designa con el nombre de "desarticulación inter-ilio-sacro-púbica" en vez de "desarticulación inter-ilio-abdominal." Los límites del colgajo comienzan a nivel de la sínfisis del pubis (un centímetro arriba), continúan paralelos al arco crural y la cresta ilíaca, hasta nivel de la espina ilíaca anterosuperior. De la espina ilíaca anterosuperior parte una línea que sigue la cara externa del trocante mayor, el surco glúteo y el génitocrural, hasta llegar al punto de partida. El Autor describe minuciosamente la desinerción de los músculos glúteos, las secciones nerviosas del ciático mayor, el crural y el obturador, insistiendo sobre la inyección previa de novocaína antes de seccionar dichos nervios. Insiste sobre la importancia de ligar definitivamente las ilíacas primitivas, lo que carece de inconvenientes y proporciona ventajas. Describe cuidadosamente la desarticulación de la sínfisis del pubis y la sínfisis sacro-ilíaca, recalcando la importancia de comenzar por la primera y atacar la segunda articulación por la parte posterior, para facilitar la desarticulación. Demuestra que después de la operación queda un gran colgajo, y presenta un medio que ha ideado para sostener la pared abdominal.

RÉSUMÉ

L'Auteur présente sa technique de désarticulation qu'il lui-même appelle "désarticulation inter-iléo-sacro pubique" au lieu de "désarticulation inter-iléo-abdominale." Los limites que marque le lambeau commencent au niveau de la symphyse du pubis (un centimétre plus haut), suit en paralléle l'arc crural, à la crête iliaque, jusqu'au niveau de l'épine iliaque postérieure et supérieure. De la crête iliaque antérieure et supérieure part une ligne qui continue par la face externe du trochanter majeur, pli musculeux, pli génito-crural, jusqu'à arriver à son point de départ. Il décrit minutieusement la désinsertion des muscles fessiers, des sections nerveuses, des nerfs sciatique majeur, crural et obturateur, insistant sur leur injection préalable de novocaine avant de les sectionner. Il insiste sur l'importance de la ligature définitive des iliaques primitives, ce qui ne provoque aucun inconvénient et donne beaucoup d'avantages. La désarticulation des symphyses du pubis et de la symphyse sacro-iliaque se décrivent soigneusement, faisant ressortir l'importance de commencer par la première et d'attaquer la seconde articulation par la partie postérieure pour faciliter la désarticulation. Il démontre qu' après cette opération il reste un lambeau bien grand, et présente un moyen idéal pour soutenir la paroi abdominale idée pour lui-même.

Extra Periosteal Pneumothorax*

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PHILADELPHIA, PA.

THIS surgical collapse procedure represents an attempt to combine the good features of both thoracoplasty and extrapleural pneumothorax, while eliminating most of the bad ones.

It permits complete collapse of the involved portion of the lung at one operation without loss of chest wall rigidity. Paradoxical breathing, atelectasis, drowning and tuberculous spread are practically eliminated by retention of efficient cough function. There is a large dead space created as in extrapleural pneumothorax, which must be maintained by air refills. This space has very little tendency to become obliterated and is lined, on its inner wall, by periosteum and intercostal muscles. This is a highly vascular layer, which furnishes a good blood supply to the outer surface of the lung, preventing necrosis of the outer walls of tuberculous cavities. The periosteum soon produces regenerated ribs on the surface of the collapsed lungs, thus rendering the collapse permanent. After this new bone is well formed (two to six months), it is easy and safe to convert the case into a thoracoplasty by simply removing the overlying ribs. In certain cases it is possible, once the collapse has become permanent, to allow the space to fill up with fluid, and in this manner to avoid the second operation. No deformity is then produced, making it useful in such cases as children, young unmarried females, and elderly persons with arthritic tendencies.

TECHNIC

The usual thoracoplasty incision is used, and the muscles are cut in the line of skin incision. The scapula is retracted forward, and as many ribs are denuded of periosteum as estimated necessary, from transverse process to costal cartilage. The under surface only of the first rib need be denuded. An extensive Semb apicolysis is then performed, carrying the dissection down the costovertebral gutter to the lowest denuded rib. The intercostal muscles are severed posteriorly along with the nerves and blood vessels. The lung may be mobilized from the paravertebral gutter to the anterior surface of the body of the vertebrae, if this is considered necessary. It will be readily seen that a truly enormous concentric type of collapse can thus be obtained.

The wound is closed in the usual manner, except that it is reinforced by suturing the lateral margin of the erector spinæ well under the muscles attached to the scapular border. We prefer a silk technic. Large amounts of bloody serum collect in the space maintaining the collapse. This should be partially aspirated daily until the tissues are sufficiently healed to hold air, which is usually in about one week. After that, the space is aspirated dry, and air refills are given as necessary.

COMPLICATIONS

Air emphysema is practically always seen especially after the [illegible]rly ref[illegible] A serosanguineous effu[illegible] All cases. This may be [illegible] cause wound rupture unless properly aspirated. Occasionally, it is small in amount and is rapidly absorbed. These cases are rare but are liable to show early re-expansion of the lung, with loss of the space. In one case in which this occurred it was necessary to re-operate for this reason. These special cases should be frequently refilled with air, and none of the small amount of fluid present should be removed.

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* Presented at the Third International Assembly of the International College of Surgeons held in Mexico City, August, 1941

Infection of the space by pyogenic organisms may occur at the time of operation due to unsterile technic, or later, due to breakdown of the wound, or possibly from bronchial fistula. This is very serious and requires early drainage of the space, followed later by a conversion to thoracoplasty with removal of all infected bone, and packing until healed by granulation. Bronchial fistula could occur but should be very are. Tuberculous infection of the space may also occur, but likewise should be rare, especially after the second operation. Maniacal psychosis occurred in one case and eventually caused our only operative mortality. This should be a no more common occurrence than after any other chest operation and in this instance was due probably to an inherent psychotic tendency in the patient. Skin breakdowns, and superficial wound infections are not uncommon, if the patient is allowed to spend much time lying on his back. This can be readily avoided by having him lie on the abdomen.

What is the eventual outcome of these cases? Most of them are converted to thoracoplasty by removing the overlying ribs within six months. They then have the same outlook as any other thoracoplasty cases. Those which are maintained as an extraperiosteal pneumothorax are allowed to gradually fill up with sterile fluid. This deposits fibrin, which eventually organizes, producing a fibrothorax. The collapse cannot be lost at that time, due to the rigid bony walls of the space. It is interesting to note that the denuded ribs do not die, but become covered with a sheath of fibrous connective tissue which extends as a complete web between each pair of ribs. This also probably represents organized fibrin. The medullary blood supply is apparently sufficient to maintain viability of the bone. Even after fifteen months there is apparently little change in the bone structure from x-ray evidence.

Should an infection develop in the space, tube drainage followed by thoracoplasty with packing must be resorted to. This becomes an ordinary thoracoplasty case after healing is complete.

RESULTS

To date we have operated upon twenty-two patients by this method. Of these, three are rather recent. Of the remaining nineteen, twelve are unilateral, seven bilateral. Ten of the unilateral cases are now sputum-negative, and show roentgenologic evidence of cavity closure. One still remains positive. One case developed the maniacal psychosis reported, followed by wound rupture, secondary infection, and eventually death, six weeks after operation. This was our only operative death. Of the seven bilateral cases, three are now negative with cavity closure; three are still positive, although cavity closure has occurred on the operated side in two of these cases. One patient died eleven months after operation, chiefly as a result of contralateral progression.

We have seen no post-operative spreads, even in the five or six cases of acute active exudative disease. Paradoxical breathing has been minimal. The post-operative course has been remarkably mild in most instances. In two instances wound rupture has occurred; due, in one case, to maniacal psychosis, in the other, to an unwise attempt to maintain a high positive pressure in the space during the postoperative period. Both cases became infected secondarily.

Two patients developed staphylococcic infection of the space, the fluid cultures becoming positive on the seventh to tenth days. One of these may have been due to lung trauma at an ineffectual attempt to produce apicolysis in a very adherent lung. The other was almost certainly due to chest-wall wound infection. Wound infection, especially superficial skin breakdown, occurred in several of our cases. We believe this to be due largely to pressure of the bare ribs upon the overlying soft tissues. We have been able to avoid this by having the patients lie upon the abdomen following operation.

To date, four cases have been converted to thoracoplasty by removing the overlying ribs. This secondary procedure is remarkably well tolerated, even though up to ten ribs are removed, probably because of the rigidity of the lung surface which preserves the usual respiratory and cough functions.

SUMMARY

A new method of effective surgical collapse has been developed, which may be considered as a new way of staging thoracoplasty. In certain cases the second operation may be avoided.

With a careful surgical technic so that wound infection is avoided, the procedure may be considered safer, and much more effective in fewer stages, than the classical thoracoplasty.

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SUMARIO

Un método efectivo de colapso quirúrgico ha sido desarrollado, el cual puede ser considerado como una manera nueva de realizar la toracoplástia. En ciertos casos una operación secundaria puede ser evitada, el proceder puede considerarse de más seguridad, y mucho más electivo en menos etapas, que la toracoplástia clásica.

RÉSUMÉ

Une nouvelle méthode pour obtenir un affaissement complet du poumon a été développée. C'est un nouveau moyen d'espacer les différents temps de la thoracoplastie. Dans un certain nombre de cas une seconde opération n'est pas nécessaire. Avec une bonne technique chirurgical afin d'éviter l'infection la méthode offre moins de dangers et est plus efficace dans moins d'interventions séparées que la thoracoplastie classique.

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Modificaciones a la Ciclodiálisis de Heine y al Instrumental*

(Modifications to Heine's Cyclodialysis)

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MEXICO, D. F.

SUMMARY

The author has modified Heine's technic of cyclodialysis, in which a small separation of the ciliary body is made, which may provoke a reduction of the hypertension. This reduction occurs more frequently if the operation is performed in advanced glaucoma. He uses an elbow-shaped spatula with an angle of 145° which permits the separation of one-half of the circumference of the ciliary body The procedure is simple and involves no danger to the vision. He states that cyclodialysis with ample separation is at present the only operation indicated for glaucoma.

DESDE que Von Graeffe en 1856 ideó la iridectomía para el tratamiento del glaucoma se han venido sucediendo diversos métodos quirúrgicos para su tratamiento.

La multiplicidad de los procedimientos y las diversas ideas que persiguen son una demostración clara de lo poco eficaces que son, para una enfermedad tan grave y que proporciona tan alto porcentaje de cegueras.

El glaucoma no es propiamente una entidad nosológica definidad, sino un síndrome hipertensivo del ojo que es debido a muy diversas causas y que tiene una gran variedad de aspectos clínicos.

El estado general del paciente, su edad sus antecedentes patólogicos, la manera más o menos lenta, o más o menos brusca como el glaucoma evoluciona, hacen variar sus modalidades clínicas y por consiguiente el tratamiento.

De todas las variedades existentes sólo debo referirme al glaucoma crónico simple y en particular al tratamiento quirúrgico. De una manera breve me referiré a las operaciones empleadas, las ventajas e inconvenientes de algunas de ellas y en particular a la ciclodiálisis de Heine que mediante algunas modificaciones aportadas por mí en la técnica he logrado obtener resultados muy superiores a los que habitualmente son obtenidos con esta operación. Sin embargo, para mayor comprensión me veo en el caso de puntualizar algunas ideas con relación a la evolución del padecimiento, a la oportunidad y a la conducta que debe seguirse en el tratamiento.

El glaucoma crónico simple por regla general es de una evolución bastante larga. Se inicia por un estado prodrómico que habitualmente puede pasar desapercibido para el paciente y aún para el médico. En dicho período las manifestaciones son pequeñas y fugaces: la hipertensión casi no existe, y cuando se observa es de preferencia en las mañanas al despertar del enfermo; las pequeñas cefaleas y adolorimientos de los ojos apenas si lo molestan y habitualmente las atribuye a trastornos digestivos, o a la falta y deficiencia de sus anteojos. El exámen oftalmoscópico no revela ninguna alteración patológica apreciable, salvo uno ligera dilatación y pequeñas movimientos de pulsación en las venas retinianas, que pueden desaparecer en ciertos momentos y en ciertos días. El estudio funcional no acusa ninguna alteración ni en la agudeza visual, ni en el campo visual. En este período es raro que el paciente acuda al especialista en busca de tratamiento y sólo por casualidad, con motivo de un cambio de anteojos o por cualquier otro achaque relacionado con la vista, es posible darse cuenta del estado hipertensivo del ojo.

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* Presented at the Third International Assembly of the International College of Surgeons held in Mexico City, August, 1941.

Cuando estos síntomas se van acentuando y se van haciendo cada vez más constantes el glaucoma se instala en su fase inicial. Entonces el aumento de la tensión es más constante y perceptible; hay a veces cierto estado hiperhémico de la conjuntiva que frecuentemente es confundido con una conjuntivitis crónica. El exámen oftalmoscópico acusa la dilatación y la pulsación venosa de una manera más constante, la papila con alguna pequeña depresión parcial, que sólo es descubierta por los ganchos que forman los vasos al cruzar el borde papilar. El estudio del campo visual puede estar aún normal, o acusar un ligero estrechamiento que puede desaparecer en los días que disminuye la hipertensión. La agudeza visual no es afectada de lejos; pero en cambio puede observarse una presbicia anticipada en relación con la edad del paciente. También es la época en que pueden presentarse los halos irisados que el enfermo mira en torno de las luces Hasta aquí las manifestaciones del glaucoma son exclusivamente funcionales y su tratamiento es exclusivamente médico, tanto desde el punto de vista del estado general, como desde el punto de vista local.

Más tarde, cuando se instala la fase de glaucoma crónico simple, los transtornos antes puramente funcionales se convierten o engendran lesiones degenerativas en las membranas internas del ojo, lesiones que lentamente se van agravando y que posteriormente se generalizan a todos los tejidos del órgano. Esta es entonces cuando la papila adquiere una excavación glaucomatosa típica más o menos pronunciada y lentamente se va atrofiando. La retina y la coroides degeneraron. El cristalino se esclerosa y aún puede ser afectado de un proceso de opacificación. El iris pierde su dibujo y degenera. La tensión ocular está constantemente alta y difícilmente se abate con los miósicos. La agudeza visual disminuye y el campo visual acusa una estrechez que ya no mejora aunque disminuya la tensión.

Antes que el glaucoma entre en este período francamente degenerativo, el tratamiento médico debe ceder su puesto sin demora al tratamiento quirúrgico. Un tratamiento médico prolongado hasta este período de la enfermedad no hará sino agravar de una manera efectiva el pronóstico.

La oportunidad es la condición esencial en todo tratamiento del glaucoma así sea médico o quirúrgico.

En efecto, un tratamiento médico en las primeras fases, dirigido contra los trastornos de causa general y contra las perturbaciones locales que originan la hipertensión, podrá evitar, o por lo menos retardar considerablemente que las perturbacione[illegible]ales [illegible]n viertan en dege[illegible] y de [illegible] manera, una intervención quirúrgica practicada cuando estas lesiones se inician será de un pronóstico mucho más favorable que si la operación se verificase en un caso de glaucoma muy avanzado.

La hipertensión ocular es debida a una defectuosa filtración del humor acuoso a través del aparato dedicado a este objeto. Las causas pueden ser diversas: físicas, químicas, mecánicas, biológicas, etc. La dificultad de la excreción del humor acuoso puede residir antes del aparato de filtración, en el aparato de filtración mismo y después de él. En el caso primero se encuentran algunos glaucomas secundarios y algunos inflamatorios agudos, en los que el iris al ser proyectado hacia la córnea, cierra el ángulo iridocorneal y dificulta u obstruye la llegada del humor acuoso al lig-ento pectinado y al canal de Schlemm donde resulta que el aparato de filtra-on no filtra a pesar de estar completamente apto para esta función. Otro caso en que el aparato de filtración estando intacto no puede funcionar es posible observarse cuando existen derrames sanguíneos, fibrinosos, o purulentos, en la cámara anterior. Una subluxación de una catarata hipermadura, un enclavamiento del iris en la córnea, el hifema, el hipopión, etc., pueden originar esta variedad de glaucoma.

El tratamiento será la iridectomía para desobstruir el ángulo iridocorneal o la punción de la cámara anterior para evacuar los derrames mencionados.

Cuando la dificultad de la filtración se encuentra en el aparato mismo de filtración o más adelante, es decir en la comunicación del canal de Schlemm con los plexus venosos que reciben el líquido de este sistema linfático, de nada valdría hacer una iridectomía como tratamiento, por que el aparato de filtración seguría obstruído como antes. Más racionales podrían ser las esclerotomías, la operación de Vicentis y otras semejantes que por la brecha practicada a través del canal de Schlemm y del ángulo de filtración haría posible el restablecimiento de la filtración, pero la práctica ha demostrado que no proporcionan sino resultados muy pasajeros.

En el glaucoma cránico simple se encuentran como causas determinantes estas dos maneras de producir la hipertensión por lesiones degenerativas y esclerosas desarrolladas en dicho aparato y en el sistema vascular del ojo, sin contar con que a estas causas se pueden sumar algunas otras físicas, químicas y mecánicas.

Cuando Wecker señaló el hecho de que los enfermos operados de iridectomía en quienes quedaba una cicatriz ectática y filtrante obtenían mejores resultados con esta intervención, surgieron varios procedimientos con la idea de formar una cicatriz filtrante, por resección de una porción de la envoltura escleral (métodos de Elliot y él de Lagrange) o por la interposición de un colgajo conjuntival entre los labios de la herida (métodos de Hosford), la interposición del iris en la iridiencleisis, o de un cuerpo extraña como es el sedal esclerocorneal de Cassey Wood.

Las operaciones fistulizantes ponen en comunicación la cámara anterior con el espacio subconjuntival en donde el humor acuoso es reabsorbido de la misma manera que si se hubiera hecho una inyección subconjuntival; pero esta comunicación y esta derivación no son estables porque son contranaturales. En efecto si continuamos la observación de un operado por uno de estos procedimientos durante las diversas etapas por que va pasando, veremos que una vez obtenida la cicatrización del colgajo conjuntival, el edema más o menos difuso producido en la conjuntiva por el derrame del humor acuoso, va disminuyendo en tamaño, se va haciendo menos difuso y después se limita formando una pequeña vesícula circunscrita por un anillo fibroso que adhiere la conjuntiva a la esclerótica. Este anillo se va estrechando poco a poco y la vesícula va disminuyendo de tamaño hasta que un día desaparece. Todo esto es debido a la proliferación de tejido conectivo el cual ha formado adherencias entre la conjuntiva y la esclera. Estas avanzan hacia la cicatriz y llenan la porción resecada de la envoltura fibrosa formando un tapón. Por la parte de la cámara anterior pasan fenómenos también muy importantes, entre ellos el revestimiento endotelial de la vesícula, lo cual es ya una dificultad seria para la filtración del humor acuoso.

A este proceso de defensa que los tejidos del ojo oponen al derrame del humor acuoso se deben los fracasos de las operaciones fistulizantes, cuya duración puede medirse por el tiempo que tarda en desarrollarse este proceso de cicatrización. De nada vale hacer trepanaciones sucesivas porque entre operación y operación el glaucoma avanza y el resultado cada vez es peor.

Además de estos inconvenientes las operaciones fistulizantes tienen el peligro de una infección endo-ocular causada por una infección conjuntival sin importancia. Y de hecho todos los cirujanos que hemos practicado algunas operaciones fistulizantes contamos algunos ojos perdidos por una infección tardía de esta naturaleza.

Por fortuna para la cirugía del glaucoma, el éxito para el tratamiento de esta dolencia no depende exclusivamente de crear una derivación difícil y efímera de los líquidos intraoculares hacia el espacio sub-conjuntival. En efecto se ha encontrado la manera de hacer dicha derivación hacia el espacio supracoroideo, con lo cual se han conseguido resultados más ventajosos y más duraderos.

Esta idea nació de los estudios de Fuchs sobre el despegamiento de la coroides en los enfermos operados de catarata, que presentaban una marcada hipotonía después de la intervención, cuyos estudios demostraron que en estos casos se había practicado una incisión demasiado lejana del limbo esclerocorneal y que se había ocasionado la desinserción del tendón del músculo ciliar, poniendo en comunicación la cámara anterior con el espacio supracoroideo. Dicha teoría tuvo la oportunidad de comprobarla en algunas piezas anatómicas, y sirvió más tarde para que Heine la utilizara como base de una nueva orientación en el tratamiento del glaucoma.

Hasta ahora no es posible saber con precisión como la desinserción del músculo ciliar produce la hipotonía ocular. Es posible que deje ampliamente abierto el ángulo iridocorneal y que la rotura de las mallas que constituyen el ligamento pectinado permitan una canalización más rapida del humor acuoso al canal de Schlemm. También es posible que se formen vías de derivación en el espacio supracoroideo a donde el humor acuoso es reabsorbido por endosmosis en los plexus venosos de la coroides, y ésta es la idea más comunmente admitida. De todas maneras aún cuando no se tenga por ahora una explicación satisfactoria del fenómeno, lo cierto es que la desinserción del tendón ciliar produce una hipotonía efectiva y permanente.

La operación de Heine llamada ciclodiálisis, consiste en desinsertar en un pequeño sector el tendón del músculo ciliar. No tiene los inconvenientes de las operaciones fistulizantes por no ser una intervención mutilante como la trepanación de Elliot y la escleroiridectomía de Lagrange en las que forzosamente hay que resecar sendas porciones de la envoltura de protección del ojo y del iris; no tiene el peligro de una infección e o-
ocular tard or con uidad
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ya mencionados que se obtienen con ella. En efecto, entre mis operados de ciclodiálisis cuento algunos que llevan ya diez años de conservar su visión. Sin embargo, en un principio tuve algunos operados en quienes la hipertensión había tenido una recidiva y el estudio de sus casos me ha permitido observar que se habían presentado en las siguientes circunstancias:

A. En casos ya avanzados de glaucoma con lesiones degenerativas manifiestas.

B. En casos en que el despegamiento del tendón del músculo ciliar había sido practicado en un sector muy pequeño.

Ratificando esta observaciones, pude darme cuenta de que la operación es seguida sistemáticamente de un éxito duradero si se interviene en glaucomas incipientes y principalmente si el despe- niento del tendón se verifica en una nsión mayor que la indicada en el odo clásico.

De aquí me vino la idea de hacer en todos los casos un amplio despegamiento del tendón del músculo ciliar que fuí agrandando hasta llegar a un mínimo de media circunferencia. El procedimiento en nada agrava la operación, que conserva toda su innocuidad que le es peculiar y le ha venido a dar una mayor eficacia, elevando de una manera efectiva la duración y el porcentaje de las curaciones.

Como esta modificación a la técnica clásica era difícil ejecutarla con una espátula ordinaria me ví obligado a mandar construír una especial, de forma angular, cuyo extremo forma con el resto un ángulo obtuso de 145 grados (Fig. 1). Los bordes de esta espátula son romos, sus dos caras planas tienen una pequeña ranura que permite la salida del humor acuoso y también de la sangre que ocasionalmente puede inundar la cámara anterior en el momento de la intervención. La doble ranura tiene por objeto que la espátula sea reversible, lo cual permite despegar con la misma facilidad el cuerpo ciliar en la parte comprendida arriba de la incisión escleral, cómo en la porción comprendida hacia abajo.

TÉCNICA OPERATORIA

Se hace la anestesia del ojo con una solución de cocaína al 5 por ciento o de pantacoína al 2 por ciento, instilando además algunas gotas de una solución de adrenalina al 1/1000. En seguida se practica una pequeña inyección, retrobulbar con solución de novocaína adrenalina. Se aplica el bléfarostato y se fija el ojo con una pinza, haciendo que el paciente dirija la mirada hacia arriba y adentro. Se hace una incisión conjuntival como de 15 milímetros, curva, concentrica al limbo esclerocorneal y lo más distante posible de él. El centro de la incisión debe corresponder al meridiano de las 4 horas para

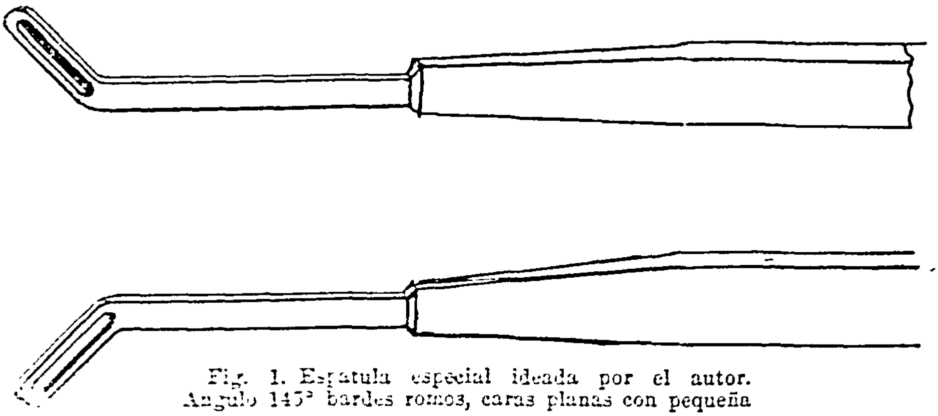

Fig. 1. Espatula especial ideada por el autor. Angulo 145° bardes romos, caras planas con pequeña ranura.

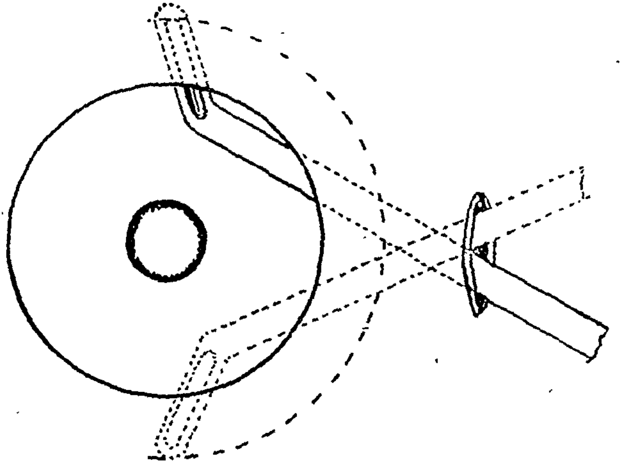

Fig. 2. Muestra como usar la espatula acodada.

el ojo izquierdo y al de las 8 para el derecho. Se diseca cuidadosamente la conjuntiva hacia el limbo y una vez que se ha descubierto la esclerótica se hace una cuidadosa hemostásis por instilaciones repetidas de una solución de adrenalina, y si es necesario cauterizando con una varilla delgada de cristal calentada al rojo los vasos esclerales que sangren exageradamente. En seguida se hace una incisión sobre la esclerótica no mayor de 4 ó 5 milímetros paralela al limbo y como a 6 milímetros de éste, de manera que el centro de la incisión corresponda al meridiano antes señalado. Dicha incisión se hace con la punta de una lanza llevada perpendicularmente a la superficie escleral, cortando cuidadosamente capa por capa hasta que la coloración negruzca de la uvea aparezca por transparencia.

En estos momentos se redoblan los cuidados para no lesionar el cuerpo ciliar, el que aparece con una superficie negra muy brillante en el fondo de la herida. Entonces se introduce entre éste y la esclerótica la espátula acodada, razando esta membrana por su cara profunda para no herir el cuerpo ciliar. Al introducir el instrumento la punta estará dirigida hacia el limbo y la abertura del ángulo hacia arriba y afuera, después imprimiendo a la espátula pequeños movimientos en forma de abanico, se dirige y se hace progresar hacia arriba para desprender con la punta la incisión del músculo ciliar hasta el meridiano de las 12 horas.

Después se retira la espátula fuera del ojo, se le dá media vuelta, de manera que la abertura del ángulo esté dirigida hacia abajo y afuera, en cuya posición se introduce nuevamente por la herida escleral, y con los [illegible] abanico se [illegible] del cuerpo [illegible] las 6 hs. (Fig. 2). Últimamente he introducido una pequeña innovación en la forma de esta espátula acodada, dándole una forma semejante a las paletas que usan los jugadores de hockey, cuya forma me parece más ventajosa en aquellos ojos de cámara anterior muy reducida (Fig. 3). De una manera sistemática opero los dos ojos del paciente en la misma sesión operatoria y esta conducta la apoyo en las siguientes razones:

1. Que no existe glaucoma crónico simple unilateral sino casos en que en ojo puede estar en fase prodrómica y el otro en una fase más avanzada.

2. Que aún en el glaucoma absoluto puede abatirse la tensión, con lo cual se alivian las molestias para el enfermo.

3. Que la operación es innocua y por lo mismo debe y puede hacerse en las fases iniciales del glaucoma, cosa que sería audaz con las operaciones fistulizantes.

4. Que hasta ahora con esta conducta operatoria no he tenido que lamentar ningún contratiempo, y sí he encontrado mayores ventajas.

Durante la operación pueden presentarse algunas complicaciones, y entre ellas la más importante es la salida del vítreo, que es debida a la ruptura del cuerpo ciliar por no ejecutar maniobras precisas al practicar la incisión y el despegamiento de las membranas. Otro accidente, que es motivado por un temor excesivo en desgarrar el cuerpo ciliar, es caminar entre las láminas de la esclerótica y seguir hacia adelante entre las de la córnea. Hay veces también que la anestesia es incompleta, sobre todo cuando no se hace la inyección retrobulbar. Para evitar este inconveniente en ciertos casos, se hará una anestesia más profunda por medio de varias inyecciones practicada sobre la pared orbitaria, tratando de bloquear los nervios supra e infraorbitarios y los nasales. Finalmente, se ha señalado como un accidente grave, la luxación del cristalino o la formación de una catarata traumática y la iridodiálisis, accidentes que en verdad no dependen de la operación.

Entre las complicaciones tardías es frecuente observar placas de atrofia del iris, debidas al traumatismo que sufre esta membrana, y diversos tipos de catarata y despegamiento de la retina. Esta última complicación se ha visto preferentemente en aquellos casos en que ha sido lesionado el cuerpo ciliar y se ha perdido el vítreo.

La ciclodiálisis está indicada por excelencia en los casos de glaucoma crónico simple y conviene practicarla en la época más prematura posible, es decir, cuando las alteraciones del campo visual apenas comienzan a presentarse. Sin embargo, cuento entre mis operados algunos en los que el campo se había reducido a cerca de 20 grados, con excavación y palidez de la papila y que, sin embargo, han conservado la visión por varios años, permaneciendo la tensión abatida.

En el glaucoma subagudo la operación también está indicada, siempre que

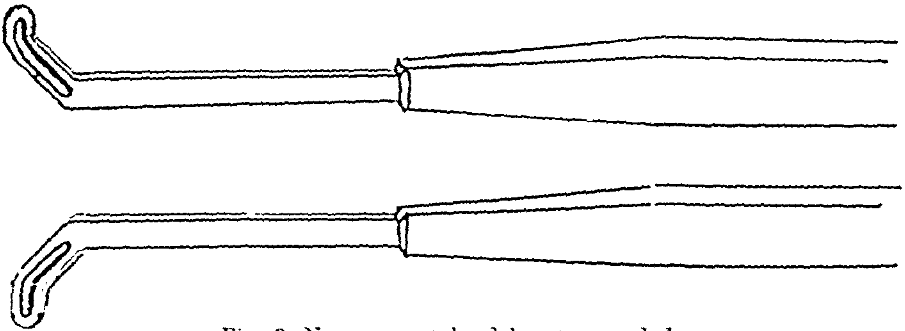

Fig. 3. Nueva espátula del autor acodada.

no exista un proceso inflamatorio capaz de reactivarse por el traumatismo operatorio. Aquellos casos con vítreo turbio, sinequías del iris, depósitos pigmentarios sobre la cápsula cristalineana y sobre la Descemet, son inadecuados para la ciclodiálisis. La operación también está contraindicada en el glaucoma inflamatorio. Sin embargo, en estos casos y en los de glaucoma subagudo, puede practicarse haciendo previamente una iridectomía y semanas más tarde la ciclodiálisis, ya cuando toda manifestación inflamatoria haya desaparecido.

Además del glaucoma *crónico* en sus diversas modalidades, la operación tiene una indicación muy importante en el tratamiento del glaucoma secundario debido a sinequías anteriores, enclavamiento del iris, etc. etc., como acontece a veces después de la extracción de la catarata; pero no se practicará hasta que haya desaparecido toda huella inflamatoria.

Los resultados de la ciclodiálisis por la técnica clásica, es decir haciendo un pequeño paso al humor acuoso hacia el espacio supracoroideo, han sido suficientes buenos para ganar cada día varios adeptos. Sin embargo no es raro encontrar en la literatura oftalmológica de vez en cuando algún artículo señalando algunas complicaciones y la recidiva de la hipertensión. Indudablemente esto se debe a que se ha intervenido en casos muy avanzados y a que se ha practicado un pequeño despegamiento del cuerpo ciliar.

Los resultados de la operación haciendo un amplio despegamiento según la técnica que acabo de describir son siempre *muy satisfactorios*. La operación en nada agrava su innocuidad caraterística y es tan fácil de hacer como la efectuada por la técnica clásica.

Hace aproximadamente diez años que vengo haciendo esta operación en mis pacientes y cuento entre ellos algunos que hasta la fecha conservan salvada su vista. Otros posteriormente han sufrido la formación de cataratas y han podid ser operados de ellas como si se tratar de cataratas normales. Los resultado en los casos recientes son verdaderamente espectaculares, porque el camp visual se amplía y la excavación parcia de la papila y los ganchos vasculare formados en sus bordes desaparecen despúes de la intervención. Aún en los caso considerados practicamente como perdidos, con papila fuertemente excavada atrofiada, con el campo visual casi reducido al punto de fijación, y la agude visual muy disminuída, es posible detener o retardar por varios meses y aú por años, el desenlace dramático de est grave y traidora enfermedad.

Para terminar diré ahora lo que en otras ocasiones he expresado con relación a esta intervención quirúrgica. Es la única operación anti-glaucomatosa en que puede el oculista esperar confiadamente un buen resultado, y que tiene la ventaja de su innocuidad.

SUMARIO

El autor ha introducido una modificación a la técnica de la operación de Heine, llamada ciclodiálisis, esta operación a la técnica de la operación de pequeño sector el tendón del músculo ciliar, y con ella es susceptible de obtenerse una recaída de la hipertensión. Esta recaída ocurre con más presencia en las glaucomas avanzadas. El autor usa una espátula con un ángulo de 145° que permite un despegamiento del tendón con un minimum de media circunferencia. El procedimiento no agrava la operación y le da mayor eficacia. El autor estima que la ciclodiálisis con amplia separación es en el presente la única operación indicada para el glaucoma

L'auteur a ne
Heine pour

fait une légère séparation du corps ciliaire. Cette séparation peut provoquer une réduction d'hypertension oculaire. Cette réduction survient plus fréquemment quand le glaucome est avancé. L'auteur emploie une spatule coudée a un angle de 145°; cette spatule permet la séparation d'une demie de la circonférence du corps ciliaire. Le procédé est facile et n'entraine aucun danger pour la vision. Il affirme que la cyclodialyse avec séparation suffisante est de nos jours la seule opération indiquée pour la glaucome.

Action of Normal Hearts during Operative Procedures under Spinal Anesthesia

As Studied by Graphic, Visual and Auditory Methods*

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A STUDY of the medical literature has revealed that only a few electrocardiograms and no reproducible recordings of heart sounds have been made during major operations under spinal anesthesia. Since many electrocardiographic studies of various abnormal cardiac changes during inhalation anesthesias have been reported, it is thought that it might be of value to observe the cardiac reactions during spinal anesthesia.

LITERATURE

All the following reports deal with electrocardiographic findings during operation, mostly under inhalation anesthesia.

Owen[1] carefully reviewed all the work done on this subject prior to 1933, while Crittenden and Ivy[2] conducted experiments on viscerocardiac reflexes during operations.

Maher, Crittenden and Shapiro[3], continuing the electrocardiographic experiments of the earlier workers, report that the most frequent heart changes during anesthesia (78 of 89 cases were inhalation anesthesias) were a suppression of the *P*-waves and assumption of nodal rhythm (this occurred in 34 of 89 cases), and these were probably due to deep anesthesia. The operative procedure or the pathologic changes found were not important factors and visceral stimulation apparently resulted in nothing more than extrasystoles in 10 cases and bradycardia in four.

Hill[4] believes operative procedures have little effect on the heart. Of all anesthetics chloroform is the most toxic to the myocardium, resulting in multiple ventricular extrasystoles.

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*Presented at the Third International Assembly of the International College of Surgeons held in Mexico City, August, 1941, in collaboration with Dr. Charles H. Arnold.

Krumbhaar[5], Lennox, Graves and Levine[6] found various types of arrhythmias in general anesthesias. Heard and Strauss[7] reported one case of nodal rhythm in a series of 21 ether anesthesias.

Wachsmuth and Eismeyer's[8] results show (in both dogs and human beings) that cardiac irregularities are due more to the anesthetic than to the operative manipulation. Levy[9] noticed ventricular tachycardias in cats under chloroform anesthesia, which, in some cases, resulted in ventricular fibrillation and death. Seevers, Meek, Rovenstine and Stiles[10], in experimental work on dogs with high concentration of cyclopropane, reported: "Two dogs died with ventricular fibrillation, occurring after short runs of ventricular extrasystoles and tachycardia."

Kurtz, Bennett, and *Shapiro*[11] *summarize* 113 cases of anesthesia during surgical procedures, 13 of which were done under *procaine and the balance* under general anesthesia, as follows: (1) Disturbance of rhythm constituted the most striking changes noted; (2) the lowest percentage of arrhythmias occurred with procaine and the highest with chloroform; (3) only 21 per cent failed to show some type of disturbance, and (4) *no constant relationship could* be established between arrhythmias and the depth of the anesthesia or operative manipulations.

Reid and Brace[12] have recently shown that vagovagal reflexes disturb cardiac activities. These changes were most pronounced under light cyclopropane anesthesia during the introduction of intratracheal tubes.

Reid[13] says vagovagal reflexes might decrease the blood supply to the myocardium by constricting the coronary arteries. These reflexes are of serious import in altered hearts or during light anesthesia. All hearts under anesthesia are functionally deranged. Thus a normal heart under anesthesia is as vulnerable to these reflexes as a diseased heart without anesthesia.

Guedel[14] states that cyclopropane does produce arrhythmias and, although they must be respected, they need not be feared, for they are only reflex in origin and not due to direct toxicity to the heart muscle.

The Council on Pharmacy and Chemistry[15] reports that unusual cardiac effects (arrhythmias) are encountered with cyclopropane and that high concentration of this gas and other drugs that increase cardiac irregularities should be avoided.

Allen, Stutzman and Meek[16] believe cyclopropane stimulates a brain center above the pons and this, in turn, stimulates the heart through the sympathetics. The direct action of adrenalin on these sensitized hearts results in ventricular tachycardia.

Meek[17] indicates that with cyclopropane anesthesia anoxemia is a predisposing factor in arrhythmias, and that the gas is toxic to the heart in heavy concentrations. He concludes that (1) great inhibition of the sino-auricular node results in premature systoles and independent ventricular rhythms, and (2) these same changes are due to actual *stimulation of the lower* automatic centers. Ventricular tachycardias frequently grade over into ventricular fibrillation in dogs.

In one case of spinal anesthesia out of three, Maher, Crittenden, and Shapiro[3] report a nodal rhythm with retrograde conduction to the auricles. This is the only electrocardiographic study of heart changes during spinal anesthesia found by the author in the medical literature.

Now, while we must not forget the beneficial action of inhalation anesthetics, we must remember the cardiac changes (some of which are serious) which follow their employment.

THE HEART AND SPINAL ANESTHESIA

During the past five years, in three Lincoln hospitals, 2,023 operations under spinal anesthesia were performed by one surgeon (Dr. Charles H. Arnold), with no deaths in the operating room. At St. Elizabeth's Hospital[18], in 635 cases, the anesthetist reports: "No record was kept of the heart irregularities developing on the operating table, but the number is very low." At Green Gables Hospital[19], with 729 cases, the anesthetist reports: "A close check of cardiac irregularities was not kept." However, there were two that he remembered. From Bryan Memorial Hospital[20], 659 cases are reported. No cardiac irregularities were noted. The anesthetists' reports in these 2,023 cases concerning arrhythmias and abnormal heart rates, of course, are from the purely clinical standpoint. The heart reactions in these patients during operation were followed by observation of arterial pulsations or by stethoscopic examination of the heart. Thus the types of these cardiac changes are not accurately known, so they are not being reported, though it can be stated that no serious heart changes developed.

In 43 cases, not included above, electrocardiograms and cardiophonographic records of the heart sounds were taken. The patients' ages varied from 17 to 56 years. In this series, only patients whose hearts were considered normal before operation were included, for it was believed any heart changes under such conditions could be charged to some or all of the factors entering into each operation. Records of hearts were taken during general and local anesthesias but these were not included in this paper.

FACTORS CONSIDERED

It must be emphasized that four principal factors must be considered when studying heart changes during operations: (1) the patient; (2) the anesthetist; (3) the anesthetic; and (4) the surgeon. Any one of these can spoil the experiment—any one can do a good job or a poor one. Therefore, the finished product, from the cardiac standpoint, is not the result of one factor, e.g., the anesthetic, but is a combination of all factors and must be considered as such. In this series the preliminary preparation was ordered by the same surgeon, the spinal anesthetic was injected by him, the operations were performed by him and his associates, and the patients were observed by one of three anesthetists (a different one in each hospital). The electrocardiograms and reproducible heart sound discs were taken by the author and an assistant in 43 cases. Thus, all factors in any given hospital varied about the same throughout this series.

TECHNIC

Spinal Anesthesia.—There was usually no preliminary medication of any kind, but at some time during the procedure morphine, pantopon or dilaudid was given subcutaneously. The intraspinal injection consisted of 100 to 200 mg. of novocaine with no epinephrin. Three-fourths grain of ephedrine was injected subcutaneously just before the intraspinal injection. The intraspinal needle was introduced in the mid-line in the third lumbar interspinous space. Enough spinal fluid was withdrawn to dissolve the novocaine and then the intraspinal injection was made.

Electrocardiograph.—Three standard leads were taken just before injecting the anesthetic and the heart rate at this time was considered normal for that patient. Only the second lead was taken at various intervals, from the time of starting the anesthetic until the end of the operation. An amplifying type of electrocardiograph was used and the moving beam was under observation throughout this period. From 22 to 41 tracings were taken during each operation and notes were made as to the relation of each tracing and the operative procedure being performed at that time. After this each record was carefully studied for deviations from normal.

Cardiophonograph.—This instrument was developed by the author[21] and has been used during the past three years during operations and deliveries, in preserving heart sounds in clinical cases and reproducing heart sounds for teaching purposes, during talks to the laity as sponsored by the Lincoln Health Board, and in talks to the medical profession and medical students. It makes the heart sound audible to all in the operating room throughout any period desired, and disc recordings of the heart sounds and remarks on the operation are made during various steps in the operation. This solves part of the anesthetist's problem, i.e., how the heart is acting at all times during the operation.

OPERATIVE PROCEDURES

Operations included in this series of cases, consisted of 8 appendectomies, 15 gall-bladder and gastrointestinal operations, 11 gynecologic procedures, 8 herniotomies and one nephrectomy.

DETECTION OF ARRHYTHMIAS

It is my definite opinion that the observation of the pulse is of little value in accurately detecting and interpreting arrhythmias. The actual heart rate often varies greatly from that of the pulse and many conditions can appear in the heart which are not reflected in the pulse. This is due to the fact that normal or abnormal auricular rhythms or arrhythmias are often not transmitted to the ventricle and thus not to the pulse. Also some abnormal ventricular contractions may not be strong enough, or there is not enough blood in the left ventricle to transmit a blood wave to the pulse. Many cardiac abnormalities cannot be distinguished through the stethoscope.

In my opinion, the best method of knowing the exact condition of the heart throughout an operation is as follows:

(1) Follow the changing heart sounds by means of a cardiophonograph[21], which can be used to broadcast them in the operating room throughout the anesthesia. If any change develops, these sounds can be recorded permanently on a disc.

(2) Observe the auricular and ventricular electrical actions as continuously pictured by the lag-screen belt method[22] and, if any abnormality develops, make an electrocardiographic tracing of it.

(3) The blood pressure can be constantly observed and automatically recorded graphically throughout the operation by a method developed by Slocum[23].

Thus the heart sounds can be heard by all in the operating room, the action currents of the heart can be seen and the blood pressure can be observed constantly throughout the anesthesia and, if desired, permanent records can be made in each case for future study and accurate interpretations of each cardiac abnormality developing during this period.

RESULTS

In the electrocardiograms and reproduced cardiophonographic discs, three sinus arrhythmias were discovered, but since this type is only a physiologic arrhythmia it cannot be considered pathologic. After careful study of the electrocardiograms, no other irregularities, no displacement of the "pacemaker" and no change in the formation of complexes and no arrh[illegible] were found in any case [illegible] mia was dete[illegible] light beam or reproduced [illegible]

In one patient, a boy aged 17, a sinus tachycardia developed before anesthesia with an average rate of 110 per minute. He was very nervous and apprehensive and did not respond very well to the preoperative medication.

Manipulation of abdominal organs, incision of the peritoneum or removal of abdominal tissues had no appreciable effect on the rate, rhythm, conduction, origin of stimuli or formation of deflections in the electrocardiograms. There were no cases of peripheral failure or shock and no deaths on the operating table.

CONCLUSION

This is not a long series, but in each case the cardiac reactions were carefully followed, and from this study it seems reasonable to state that the heart is little affected by spinal anesthesia or by viscerocardiac reflexes during abdominal operations under spinal anesthesia.

SUMMARY

The literature concerning the heart and anesthesia is given. By clinical methods alone, in 2,023 operations under spinal anesthesia the anesthetists reported cardiac changes in only a few patients. Forty-three patients with normal hearts were studied during operation under spinal anesthesia by means of the electrocardiograph and cardiophonograph, and in no case did an abnormal rhythm develop. Sinus arrhythmia in three cases and a sinus tachycardia were observed. A combination of methods for accurate study of the physiologic and pathologic actions of the heart during anesthesia is suggested.

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SUMARIO

La literatura concerniente al corazón y anestesia es dada. Por métodos clínicos solamente, en 2,023 operaciones bajo anestesia espinal, el anestesista reportó cambios cardíacos solamente en muy pocos de estos pacientes. Cuarenta y tres pacientes con corazón normal, durante operación con anestesia espinal, fueron estudiados por medio del electrocardiograma y electro-fono-cardiograma y en ninguno de los casos se desarrollaron ritmos anormales. Arritmia sinusal se observó en tres casos y uno de taquicardia sinusal. Una combinación de métodos para el estudio de la acción fisiologica y patológica del corazón es sugerido.

RÉSUMÉ

La littérature décrivant l'action du coeur sous anesthésie est donnée. Employant uniquement des méthodes cliniques dans deux mille et vingt-trois opérations sous anesthésie rachidienne, las anesthésites n'observèrent des changements cardiaques que dans peu de malades. Dans quarante-trois malades ayant un coeur normal, on étudia durant l'opération sous anesthésie rachidienne, le rythme cardiaque, au moyen de la cardiographie et de la cardiophonographie. Dans aucun des cas, on n'observa un rythme anormal. On observa dans trois malades, une arythmie sinusale et aussi une tachycardie sinusale.

L'auteur suggère une combinaison de méthodes pour l'étude exacte de l'action physiologique et aussi de l'action pathologique du cour dans le cours de l'anesthésie.

La Hormonoterapia con Foliculina en las Mastosis*

(Endocrine Therapy of Mastitis)

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LIMA, PERU

SUMMARY

The author discusses his observations of a number of cases of mastosis treated successfully with folliculin. In twenty-five cases the results have been uniform and the cures complete, with marked amelioration in others. A regression was first noted, with final disappearance of the tumor masses. Correction of the dysmenorrhea ensued. The benefits of folliculin therapy are explained on a substitution basis in patients who have a deficiency of follicular hormone. Dysfunction of the ovary results in abnormal hyperplasias of the breasts.

The author considers the use of small and continuous doses of folliculin inefficient and even dangerous, based on physiologic considerations. He administers the hormone in moderate doses in an interrupted form of therapy, given periodically in such a manner that the administration of the hormone coincides with the menstrual cycle. Thus it acts as a normal stimulus to the breasts.

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*Presented at the Third International Assembly of the International College of Surgeons held in Mexico City, August, 1941.

BENÉVOLAMENTE invitado a contribuir con un trabajo en este importante certamen, lo que compromete mi gratitud, voy a someter a vuestra ilustrada atención, señores, los resultados favorables que en varios años de utilisarlo, he obtenido tratando numerosos casos de mastosis, bien definidas, con foliculina; he empleado siempre de los preparados de esa hormora el Progynon oleoso de Schering, sistemáticamente administrado en la forma interrumpida y las dosis que detallaré oportunamente.

Como me sirvo de ese tratamiento más de cinco años ya, ha publicado antes de ahora algunas de mis observaciones comentadas. Pero complementadas esas observaciones y juicios con lo obtenido después en otros casos más recientes, donde he podido observar más detenidamente la evolución regresiva de algunas mastosis con la foliculinoterapia, y ampliados mis conocimientos teóricos con lectura de muchos trabajos nuevos de experimentadores y de prácticos sobre la influencia en las mamas de la hormona folicular, favoreciendo unos la foliculinoterapia en las mastosis y rechazando otros este tratamiento por considerar la foliculina entre las substancias cancerígenas, someteré a la ilustrada atención de esta Asamblea con un resumen del conjunto de resultados de mis observaciones sobre esta terapia, mi modesto juicio de las causas de su fracazo en algunos centros clínicos, y mi opinión contraria a la supuesta acción carcinogenética de la hormona folicular, por lo menos debidamente administrada. Estimo deber mío defender este tratamiento de las mastosis, que considero de gran valor porque con él he obtenido constantemente la curación de esas tumoraciones de las mamas.

He tratado hasta ahora alrededor de 30 casos de mastosis con las inyecciones de Progynon oleoso. En todos los casos observé mejoría manifiesta; pero de ellos solo 25 curaron, desapareciendo las tumoraciones o nudosidades mamarias y los síntomas subjetivos que las acompañaban. Las pacientes restantes, mejoradas, no sufriendo ya dolores y con sus tumoraciones reducidas de volumen, dejaron de presentarse en el consultorio y las he perdido de vista. Sin embargo, creo que también estas pacientes obtuvieron gran beneficio con las inyecciones de foliculina; se trataba de mujeres muy excitables y tímidas, que si hubieran visto crecer de nuevo sus tumoraciones mamarias hubieran regresado a solicitar mis consejos profesionales, recordando el alivio antes recibido con el tratamiento hormónico.

Algunas de las mastosis curadas con esta hormonoterapia se manifestaron en forma de tumores bien definidos y móviles, otras tumoraciones algo difusas. En dos casos observé reacción inflamatoria alrededor del tumor, que estaba adherente a la piel que lo recubría; pero no habiendo ulceración de ella y siendo de mastosis el conjunto del cuadro, traté también a estas pacientes con inyecciones de Progynon, y se cuentan entre las curadas de mastosis con este método.

DIAGNÓSTICO

Lo más importante, a mi juicio, para el éxito del tratamiento es precisar el diagnóstico de mastosis antes de administrarlo. Tumor único aislado o difuso, es sospechable de ser verdadera neoplasia, maligna a benigno; las verdaderas mastosis son tumoraciones múltiples. Sin embargo, la enferma nos consulta de ordinario por solo la masa mamaria de más relieve; pero palpándole detenidamente sus senos se encuentra siempre en las mastosis también otras nudosidades más o menos duras no solo en el seno que lleva la gran tumoración sino en el otro, que están constituídas por espesamientos de los tejidos glandulares, limitados o de contornos no muy precisos, y algo sensibles a la palpación. Esta comprobación contribuye mucho a establecer el criterio clínico para diagnosticar mastosis.

Las enfermas con mastósis verdaderas acusan siempre trastornos menstruales si no han llegado a la menopausa. En general se trata de dismenorréas por carencia, menstruaciones escasas, cortas y dolorosas; lo cual es signo presumible de que en ellas no se produce hormona folicular en cantidad suficiente; con el tratamiento hormónico de sus mastosis mejoraron también en nuestros casos las menstruaciones de estas pacientes en cantidad y regularidad, lo que parece comprobar ese supuesto.

Las enfermas con mastosis son todas en general más o menos emocionables en exceso, nerviosas. Las que están en la menopausa o el perido premenopáusico, presentan verdadero hipertiroidismo, temblores, palpitaciones cardiacas y gran irritabilidad nerviosa por exceso de función tiroidea; pero también estos fenómenos se observan con frecuencia en mujeras mas jóvenes con mastosis, y es elemento que contribuye al diagnóstico en presencia de esas tumoraciones mamarias.

Comprobar presencia de infartos ganglionares en la axila del lado correspondiente al seno que lleva la tumoración mastósica prominente no se debe considerar signo seguro de evolución maligna de la tumoración o de que es verdadera néoplasia maligno. Hemos tenido dos casos de curaciones de mastosis complicadas con estos infartos ganglionares, que son probablemente inflamatorios o extesiones de las hiperplasias mastósicas a lóbulos mamarios aberrantes. Sin embargo, en estas circunstancias deberá vigilarse más asiduamente a las pacientes siguiendo de cerca la evolusión de sus tumoraciones bajo la influencia del tratamiento hormónico.

Repetimos que en el diagnóstico de mastosis damos importancia principal a la presencia en los senos de focos nodulares múltiples, que serán más demostrativos si existen en ambos senos. Aunque según el Profesor Lanfranco Lazzarini (I) las mastosis son con frecuencia unilaterales por susceptibilidad mayor de uno de los senos a ser perturbado en estructura por disfunciones ováricas o tiroideas, nuestra experiencia nos revela que eso debe ser solo accidental, pues hemos hallado en todos nuestros casos de mastosis, además de las tumoraciones principales, medianas o voluminosas, otros nódulos más o menos abundantes diseminados en el mismo seno, y casi siempre también nódulos o desigualdades de consistencia de límites imprecisos, pero bien palpables, en la masa glandular del otro seno.

Como medio de diagnóstico no hemos recurrido en nuestras pacientes a exámenes radiográficos porque esquivaron someterse a ellos, tanto por evitarse gastos como ansiosas de guardar extrema reserva sobre su dolencia. Sin embargo, en los casos dudosos tanto las radiografías del seno como la transiluminación del mismo pueden ser muy ilustrativas, pues se afirma que sombras de contornos bien limitados corresponden a mastosis, y sombras de bordes esfumados a tumoraciones cancerosas.

Tampoco nos hemos servido de biopsias comprobatorias de la histología de estos tumores en casos sospechosos de cancerisación. Los pacientes estudios de Sir Robert Muir, de Edimburgo, (2), especialmente de los tumores de las mamas, han revelado que en ellos la evolución maligna suele estar muy localisada; por consiguiente es probable que siendo positiva no la presente el fragmento excindido para la biopsia; lo cual hace desconfiar de este [illegible] de diagnóst[illegible] dio c[illegible] [illegible] dad [illegible] es pues concluyente según esos estudios de ausencia de cancerisación; dato importante con el cual omitimos en nuestros casos las biopsias para precisar el diagnóstico, ahorrando así a las enfermas el traumatismo tumoral y las molestias que pudiera ocasionarles la exéresis.

Todas nuestras pacientes con mastosis eran premenopáusica o estaban en plena menopausa, con excepción de seis de ellas todavía en período menos avanzado de la vida, *pero ya con más de* treinta años. Todas las que menstruaban todavía *tenían menstruaciones* dolorosas, escasas, y *varias* de ellas menstruaciones irregulares. Emocionables y *nerviosas*, no deseaban ser operadas para eliminar sus tumoraciones, ni someterse a ninguna *maniobra* que pudiera *significarles* dolor o en que interviniera el bis- ırí; circunstancias éstas que contribu- on mucho a que omitiera en ellas las psias.

GÉNESIS DE LAS MASTOSIS

Hay *acuerdo* entre los observadores y los clínicos en que las mastosis son resultado de estímulos anormales de las *mamas* por disfunción del ovario y del tiroides. Pero es grande la divergencia de *opiniones* en lo que respecta al tipo de *disincrinia* que determina en las mamas las formaciones tumorales que designamos mastosis. Sin embargo, sabiéndose que la foliculina controla el tejido epitelial de las mamas y la luteina el tejido fibroso, siendo ambas estimulantes del tejido respectivo, y que en esas tumoraciones predomina el elemento conjuntivo, creemos que debe darse caracter causal más probable de esas hiperplasias *mastósicas* a las disfunciones ováricas *que determinan* carencia de hormona folicular o exceso de luteina, y por consiguiente al utilisar la *hormonoterapia* contra las mastosis servirse de la foliculina.

Antes de ahora se consideraban como procesos distintos los diversos tipos de mastosis; pero en la actualidad se tiende *a creer* que son solo faces diferentes de *un proceso* único de hiperplasia anormal. *Con muy buen* criterio afirma el Dr. Atkins (3) que mastopatías crónicas, adenosis, mastitis crónicas y formaciones *quísticas* de las mamas son estados evolutivos o variantes histológicas de la *misma anormalidad* por hiperplasia no *fisiológica*, y que pueden coexistir en la misma paciente; lo que hemos observado *también*, y creemos, como ese clínico, que son grados de evolución o reacciones individuales *disemejantes* de un mismo proceso, y *no* entidades clínicas separables. El nombre que suele darse á estas *alteraciones* mamarias de mastitis crónicas no parece el más apropiado para designarlas, pues no se trata en estos casos de *inflamaciones* crónicas de causa bacteriana; por ello estimamos preferible el título de mastosis.

Respecto a la acción cancerígena de las hormonas estrógenas, no esté bien demostrada, es solo hipotética y no admitida en el ser humano por muchos observadores. Desde que Lacassigne consiguió estimular *con* el estrógeno desarrollo del cáncer mamario en ratones, administrándoselo *en altas dosis y muy* largo tiempo, se ha *experimentado mucho* para ratificar la certeza de ese interesante. Pero siempre los experimentadores han administrado a los *animales para* conseguir resultados positivos, muy altas dosis de hormona estrógena, *cotidianamente* y durante mucho tiempo; sin embargo, aún así solo *obtuvieron* la *aparición* de tumores mamarios *malignos en* grupos de animales suceptibles al cáncer por herencia, y nunca en los refractarios. Estas experimentaciones, pues, solo revelan que la hormona folicular puede favorecer la formación en las mamas de tumores malignos si son animales predispuestos a los que se administra, excitando fuerte y prolongadamente los tejidos epiteliales de esa glándula; pero no significan precisamente sus resultados que la hormona sea carcinogenética siempre, y menos administrada en dosis moderados como excitante temporal de la actividad proliferativa mamaria. Además, Sir Robert Muir (4) y otros observadores han demostrado que los tumores malignos son siempre precedidos de irritaciones o estimulaciones crónicas; y tanto él como los demás sostienen que todos los cancerígenos químicos, y posibles cancerígenos hormónicos, son los primeros aisladores por determinar alteraciones vasculares, y estimuladores en exceso los segundos; con lo cual se rompe la armonía normal del metabolismo celular, exagerándolo, y dando lugar a evolución maligna de los tejidos u órganos comprometidos por modificación de su actividad vital, que se hace intensiva y monstruosa por readquirir características embrionarias.

En los casos de todos los experimentadores donde en los animales se desarrollaron tumores malignos de las mamas por administración de hormona folicular, esta administración fué intensiva y continuada por muy largos periodos; actuó, pues, como estímulo exagerado anormal de las glándulas, creando así en ellas terreno favorable para la carcinosis, si eran algo susceptibles esa degeneración. De estos experimentos, sin embargo, se deduce lección práctice que indica prudencialmente utilisar siempre la foliculina en dosis moderadas como estibulante mamario, y administrarla solamente en el período donde el ovario al estado normal la produce en mayor cantidad durante el ciclo menstrual.

MI EXPERIENCIA

Acostumbrado, como es habitual en nuestras clínicas, a hacer la exéresis operatoria de todas las tumoraciones mamarias operables, benignas o malignas, circunstancias accidentales me obligaron a desistir de la intervención operatoria en una de mis pacientes; resumiré esa historia.

Se presentó en mi consultorio una señora de 45 años para que le tratará tumoración del seno izquierdo, relativamente voluminosa, pero no adherente á la piel. Haciéndole, como es regla, el exámen de ambos senos, comprobé la presencia en las masas glandulares de los dos senos de otros nódulos o induraciones pequeñas diseminadas en ellas. Propuse a la enferma operarla para extirparle el tumor prominente; pero se negó a ser intervenida, diciéndome que llevaba ese *bulto* desde varios años antes, y que solo la molestaba haciéndose ligeramente doloroso en cada época menstrual; agregó que tenía horror a las operaciones y confiaba la curaría solo con remedios locales y medicamentos. Insistiendo en la necesidad de la operación, no pude persuadirla, y entonces deseando hacer algo por ella recordé que varios prácticos franceses habían empleado en tumoraciones benignas de los senos la hormono terapia con foliculina, con resultados casi siempre favorables. Le formulé de los preparados de esa hormona el Progynon oleoso, de que conocía la eficacia, para inyecciones intramusculares en ampolletas de 10.000 unidades, indicándole se pusiera tres de esas inyecciones cada mes, al iniciarse el correspondiente ciclo de maduración folicular periódico, es decir 15 días después de terminado el menstruo anterior; estas inyecciones le serían puestas con intervalo de dos días entre cada una y la anterior. Dos meses después regresó al consultorio muy animada y feliz; entonces con verdadera sorpresa comprobé disminución muy marcada del volumen de su mastosis, reducido a
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habían sido más abundantes, indoloros y más largos. Continuando con el tratamiento, en los tres meses siguientes desapareció casi completamente la tumoración, quedando reducida a nodulito algo más consistente que el resto de la masa glandular; y desde entonces esta señora ha seguido con menstruaciones regulares e indoloras, algo abundantes, sin necesitar de consejos profesionales.

Con la evolución tan favorable de este caso de mastosis administrando a la paciente hormonoterapia foliculínica, me estimulé a seguir aplicando ese tratamiento en otros casos similares, obteniendo con el resultados uniformemente buenos. Después el trabajo de los doctores norteamericanos Dean Lewis y Geschickter(5), aparecido en "The Journal of The American Medical Associaion," confirmando la eficacia de esta rmonoterapia en estas hiperplasias del o, y la lectura de otros estudios poseriores hallados en varias publicaciones profesionales, acrecentaron mi confianza en esta forma de tratamiento de las mastosis, y he seguido enpleándolo siempre contra las tumoraciones mastósicas.

Hasta el presente he tratado con inyecciones de foliculina 30 casos de mastosis; pero de estas pacientes solo 25 siguieron el tratamiento hasta la desaparición completa o casi completa de las tumoraciones y nódulos mas tósicos; las demás, aliviadas notablemente después de dos meses de tratamiento, no volvieron a presentarse y las he perdido de vista; aunque en realidad son también éxitos incompletos, no las considero entre las curaciones.

En los últimos tiempos he tratado con esta hormonoterapia dos casos en que las enfermas me consultaron solo por dismenorréa dolorosa; pero teniendo en consideración las estrechas relaciones de esta forma de desórden de los menstruos con la presencia de mastosis, examiné los senos de ambas enfermas hallándoles gruesas masas hiperplásicas en los dos senos. Tratadas inmediatamente con hormonoterapia foliculínica según el método que describiré en seguida, sus dismenorréas se aliviaron pronto, y conjuntamente las masas mastósicas disminuyeron de volumen y acabaron por desaparecer.

Los resultados muy favorables, señalados precedentemente, que he obtenido tratando las mastosis con foliculina, y las grandes divergencias de opiniones sobre el valor de este tratamiento, muy encomiado por unos, mediocre para otros, e ineficaz y peligroso para algunos prácticos, me imponen el deber de someter los frutos de mis observaciones en conjunto al conocimiento de la Asamblea; estimo que mis éxitos uniformes comprueban el valor terapéutico de la administración de foliculina en las mastosis. El criterio independiente e ilustrado de esta Asamblea juzgará estos hechos, y su dictámen servirá para precisar en forma definitiva el verdadero valor de esta terapia tan controvertido.

Entre los que recomiendan por experiencia personal el tratamiento como muy eficaz, citeré al Profesor Mauricio, de Milan(6); los doctores Lewis y Geschickter, antes citados; Lazzarini, también recordado, que combate conjuntamente el hipertiroidismo frecuente en estas enfermas. Otros clínicos ocupándose del tratamiento, son menos optimistas por haber obtenido con el tratamiento solo resultados mediocres en la mayoría de sus casos, y regresión de las mastosis en muy pocos de ellos. Entre los que combaten el tratamiento creyéndolo ineficaz y peligroso, citaré al Dr. Atkins, cirujano del Guy Hospital de Londres, que lo ha estudiado clínicamente(7); los doctores Lipschütz y Vargas de Santiago de Chile (8), que considerando la foliculina carcinogenética verdadera, la substituyen con la progesterona para combatir tumoraciones; además hay otros observadores y prácticos que, como los nombrados, niegan toda eficacia a este tratamiento hormónico. Estas divergencias como dije antes, me estimulan mucho a someter a vuestro ilustrado criterio hechos definidos, relativamente numerosos, que apoyan las opiniones afirmativas en favor del tratamiento.

FORMA DE ADMINISTRACIÓN DE LA FOLICULINA

Según los numerosos trabajos que he tenido oportunidad de leer sobre administración de foliculina en las mastosis, los profesionales que han empleado esta terapéutica con la hormona natural o sintética, recomiendan de ella dosis muy moderadas para evitar su posible influencia carcinogenética; así parecen olvidar que la foliculina en pequeñas dosis carece de acción sobre las mamas. También prescribiéndola en forma continua por largos periodos, no toman en consideración que experimentalmente esa hormona solo ha revelado propiedades carcinogenéticas empleándola constantemente en los animales muy largo período de tiempo. Además, sabemos que la función modificadora del tejido mamario que posee la foliculina es temporal, periódica y fugaz, y que está limitada al período de iniciación del ciclo menstrual. Estos datos indican no usarla en forma continua como medio terapéutico substitutivo, sino restringir su administración a los períodos de su actividad normal.

Basados en esas consideraciones hemos utilisado en nuestros casos las inyecciones de foliculina, sirviéndonos siempre del Progynon oleoso de Schering en dosis de 10.000 unidades, en la forma siguiente:

Primera inyección intramuscular de una ampolleta (10.000 unidades), 15 días después de terminar el período menstrual anterior:

Segunda inyección intramuscular, de dos ampolletas (20.000 unidades), 48 horas después de la inyección anterior;

Tercera inyección intramuscular, de dos ampolletas (20.000 unidades), dos días después de la precedente.

En total administramos 50.000 unidades cada mes; después interrumpimos el tratamiento, repitiéndolo en la misma forma al iniciarse el siguiente ciclo menstrual, y continuamos administrado así *la foliculina varios meses más hasta* obtener los resultados deseados.

La regresión de las tumoraciones mastósicas con el tratamiento así administrado es aparente desde el segundo mes; pero la desaparición completa de ellas requiere por lo menos seis meses de tratamiento, que debera prolongarse más aún si persisten masas tumorales palpables, ó cuando la dismenorréa, aunque atenuada, persiste.

Influenciado por el trabajo del Dr. Lazzarini(9), que recomienda adicionar al tratamiento de las mastosis con foliculina sueros antitiroideos para combatir el hipertiroidismo que presentan las enfermas, y observando en casi todas mis pacientes signos de hipertiroidismo, les he administrado, con las inyecciones de Progynon, la antitiroidina de Moebius en dosis de cinco gotas diarias, quince días cada mes, iniciando esta administración oral con la primera inyeccion del correspondiente mes. Creemos que esta adición favorece el éxito del tratamiento controlando el elemento síquico que integra las mastosis, o el neurosismo de estas pacientes que, según algunos prácticos, acrecienta la sintomatología de las mastosis.

SUMARIO

Presentamos sintetisadas las observaciones de casos de mastosis tratadas con éxito con fuliculinoterapia. Los resultados han sido uniformes; curaciones completas en 2[illegible] casos [illegible] mastosis [illegible] alivio marcado [illegible] cas [illegible] tumora [illegible] t ha determinado regresión primero, y después desaparición de las masas tumorales, y al mismo tiempo ha correjido los trastornos dismenorréicos de las pacientes.

Tratamos de explicar estos beneficios de la foliculinoterapia por la influencia de ella como substitutiva de carencias hormónicas foliculares en las pacientes que llevan masas mastósicas, y donde habiendo producción insuficiente de hormona folicular dominan sobrelos senos las influencias de la progesterona o luteina, derivando de esa disfunción del ovario las hiperplasias anormales que aparecen en los senos.

Fundados en razones de órden fisiológico, consideramos ineficaces y aún peligrosas empleadas contra estas tumoraciones mamarias, las dosis muy reducidas y continuas que se acostumbra [illegible] ministrar de la hormona folicular.

[illegible] os la forma en que administra[illegible] esa hormona a las pacientes dosis moderadas, pero suficientes para estimular las mamas como substitutivas; no empleadas continuamente sino en forma interrumpida y periódica, condicionando la administración de la hormona de manera que coincida con las épocas de su acción estimulante normal de los senos, periódica también y limitada a determinados tejidos mamarios.

Utilisando la foliculinoterapia damos poca importancia a la supuesta acción carcinogenética de la foliculina, no bien demostrada experimentalmente y negada por algunos experimentadores. Pero atendiendo a las sugerencias de este orden de algunos experimentadores en sentido afirmativo, no empleamos dosis muy altas de esta hormona, ni la administramos en forma continua a nuestras pacientes con mastosis.

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RÉSUMÉ

L'auteur analyse un nombre de cas de mastose qu'il a traîtés avec succès, par l'emploi de la folliculine. Dans vingt-cinq cas les résultats furent uniformes et les guérisons complètes. Les masses néoplasiques disparurent, avec le temps complètement. La dysménorrhée fut corrigée. Il explique les résultats obtenus, ainsi la folliculine supplée á la carense de l'hormone folliculaire. La dysfonction ovarienne entraîne l'hyperplasie anormale des seins. Les petites doses de folliculine longtemps continuées sont inéfficaces, même dangéreuses. Il administre le médicament avec interruption et de façon que l'administration de l'hormone corresponde au cycle menstruel. Donnée ainsi l'hormone agit en excitant normal du sein. La folliculine a une action carcinogénique. Pour cette raison l'auteur n' a jamais recours aux fortes doses et, pour la même raison, et déconseille l'emploi continue de la folliculine dans les cas de mastose.

Modification of Sprengel's Incision in Ideal Cholecystectomy*

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THE term "ideal cholecystectomy" was popularized by Pablo Mirizzi after most surgeons had abandoned routine drainage of the peritoneal cavity following cholecystectomy, except in those cases in which an infected gallbladder might have contaminated the field of operation. Under the leadership of Professor B. Montenegro, both young surgeons and those of the older schools of surgery adopted the new technic.

The general practice of "ideal cholecystectomy" soon made excision of the diseased gallbladder unnecessary. As yet, however, the ideal of removing the cause of the trouble and leaving the organ functioning had not been attained. Performing cholecystectomy when neither *obstruction of the biliary duct nor* infection of the gallbladder existed would expose the patient to the dangers of bile leakage, secondary infection, and the annoyance of repeated treatments, irritation of the skin and lingering fistulas.

Cholecystectomy is indicated in calculi of the gallbladder if the cholecystogram reveals good absorption of the contrast dye, if the walls contract well after the use of Boyden meal, and if the gallbladder reacts normally to the Meltzer-Lyon test, giving B bile without signs of infection.

Any suture of the fragile walls of the gallbladder is dangerous. If it is convenient to do so, routine drainage should be used for from four to six days to prevent post-operative choleperitonitis. However, the main advantage of "ideal cholecystectomy" lies in total abandonment of drainage of the peritoneal cavity. In order to retain this advantage and yet keep the gallbladder functioning without leaving a weak suture in it, I have successfully used the following technic. Each step of the procedure is shown in the accompanying illustrations.

1. An incision is made into the peritoneal cavity.
2. The gallstone (or gallstones) being located, digital exploration of the bile duct is made to ascertain that calculi are present in the gallbladder only.
3. The base of the gallbladder is exposed by grasping Glisson's capsule next to the fibrous gallbladder base with artery forceps (Fig. 1).
4. The peritoneum is opened on the hepatic surface close to the base of the gallbladder (Fig. 2).

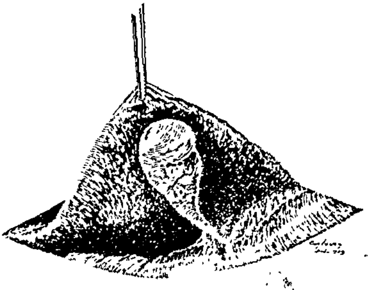

Fig. 1. Exposure o asp
Glisson's capsule next b
with artery forceps.

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* Presented at the Third International Assembly of the International College of Surgeons held in Mexico City, August, 1941.

5. The hepatic surface of the gallbladder is detached only as much as is necessary (Fig. 3).

6. The gallbladder is opened on its hepatic surface (Fig. 4).

7. Each stone is manipulated by the finger until it emerges at the level of the incision where it is removed by forceps (Fig. 5).

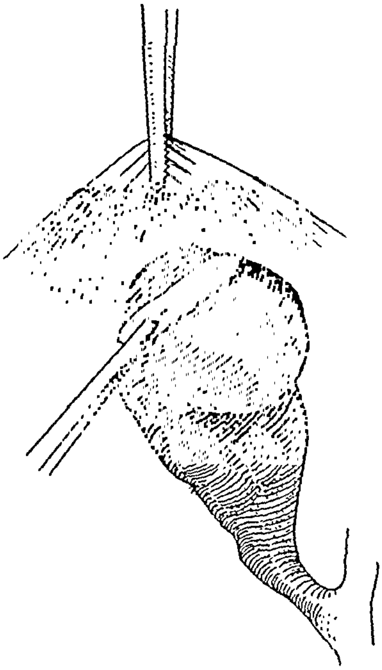


Fig. 2. Incision of the peritoneum on the hepatic surface close to the base of the gallbladder.

8. The incision is closed by artery forceps, using ligature without transfixion (Figs. 6 and 7).

9. The incision on the hepatic surface of the gallbladder is sutured (Fig. 8).

"Ideal cholecystectomy" is advisable only when the following conditions are fulfilled: (1) The walls of the gallbladder are intact; (2) the function of the gallbladder is unimpaired; (3) there is no infection of the gallbladder; (4) the biliary duct is unobstructed, and (5) there is only one stone, or a few small stones.

Cholelithiasis may recur, but I am averse to removal of the gallbladder that functions well. The probability of relapse is remote; if it does occur, another operation may be performed with no danger to the patient. Two patients on whom several operations had been performed (the first three dating from July, August, and October, 1937) were re-examined recently and showed no signs of relapse. Insufficient time has elapsed to enable the formation of a sound opinion in other cases.

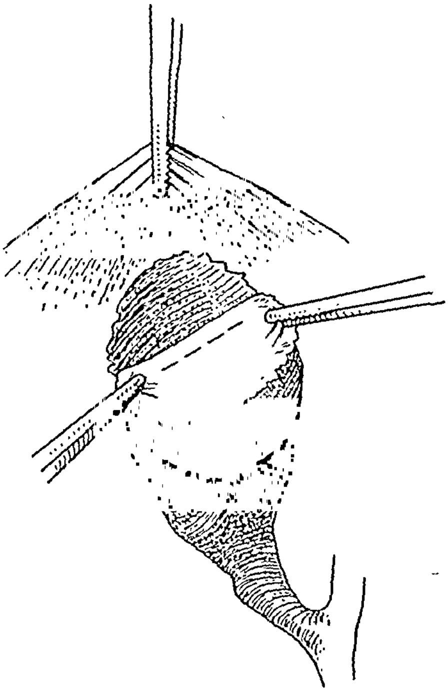


Fig. 3. Sufficient detachment of the hepatic surface of the gallbladder, varying with size of the stone.

Post-operative radiology in two cases in which the gallbladder presented normal contours and normal reaction to Boyden's test confirmed the good clinical results.

It is my opinion that the first care of the surgeon must be the confirmation of the diagnosis of calculi. If a single gallstone or a few small ones are present, they may not be noted on digital exploration. The stones elude the fingers, especially when the gallbladder is full. I flatten the gallbladder suddenly, expelling the stone, which, on its downward course, may be felt by the hand through the walls of the gallbladder.

If the fibrous portion, which is to be grasped by the artery forceps in exposing the base of the gallbladder does not exist, as sometimes happens, or it is too weak to permit a firm hold, the forceps is placed next to the hepatic peritoneal fissure, slightly to the left, to avoid interference with the incision of the peritoneum.

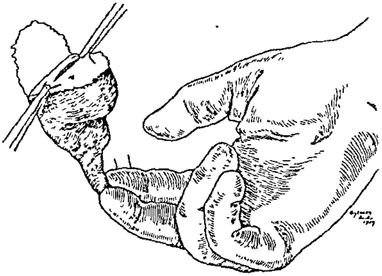


Fig. 4. Opening the gallbladder on its hepatic surface.

For the removal of small stones the incision need not be extensive. It should be sufficient merely to allow a slight detachment of the gallbladder. In cases of larger stones the detachment must be greater and it is necessary to expose a larger section of the hepatic surface. The size of the incision on the surface of the gallbladder is also relative to that of the stone or stones extracted.

One of the most important steps in "ideal cholecystectomy" is digital expression of the ballstone, using the index and middle fingers of the right hand as shown in the illustration. Not a single small stone, or fragment of one, must remain. In this procedure the movement of any instrument might injure the walls of the gallbladder, and possibly initiate a pathologic process. Introduction of a forceps or curet into the interior of the gallbladder might result in erosions of the mucosa, hemorrhages, or even perforations. For the same reason a metallic, flexible sound should not be used to explore the cystic duct; moreover, the duct should be free in order to permit the Meltzer-Lyon test and the use of Boyden's meal to determine the contractibility of the gallbladder.

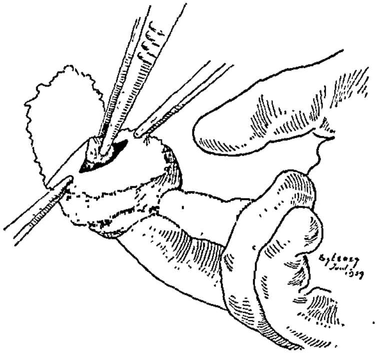


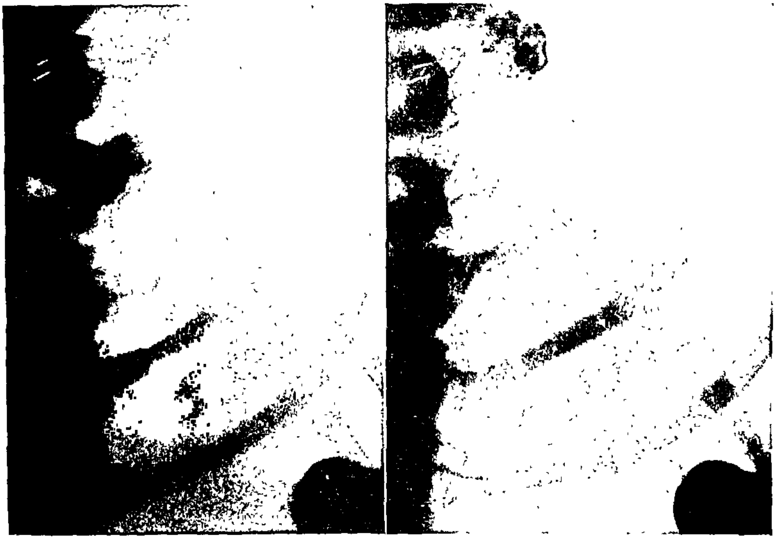
Fig. 5. Digital manipulation of gallstone, which is removed from the incision by an appropriate forceps.

In closing the incision the same ligature is employed as that used on a narrow herniary ring after sac resection.

Suture by transfixion predisposes the patient to post-operative choleperitonitis; consequently it is to be avoided. This is possible unless the stone to be extracted is very large and requires an opening that needs more than one ligature. Suture of the incision made on the hepatic surface can be continuous, not requiring more than three or four stitches. The fissure contracts into a nearly closed dihedral angle, which frequently is totally covered and thus leaves no sign of the incision.

An extensive incision in the abdominal wall is not necessary. I use a parietal incision whic dification of Sprengel's, o e in the literat

keeping trauma of the rectus abdominis to a minimum by preserving the muscle fibers when making the incision. Its use assures complete functioning of the gallbladder and precludes post-operative hernia.



Figs. 19-20. Cholecystogram of the same patient in April, 1939. Note the good contractibility of the gallbladder and the absence of stones' shadows; the partially absorbed contrast dye was administered orally (presence in the bowel of the intestines), giving in consequence a weak picture of the gallbladder.

SUMARIO

Se hace la descripción de la llamada "colecistectomía ideal," y se propone una nueva técnica, en la cual el autor hace una modificación a la incisión de Sprengel, a saber: (1) Incisión cutánea transversal, a la altura conveniente, que sólo abarca el espesor del músculo recto del abdomen. (2) Incisión del tejido celular subcutáneo, en la misma dirección y del mismo tamaño que la incisión cutánea. (3) Incisión transversal de la aponeurosis anterior del músculo recto del abdomen. (4) Desprendimiento de las fibras musculares y luego intersección de la aponeurosis, con el fin de aplanar los bordes de la incisión, hacia arriba y hacia abajo. (5) Disociación de las fibras del músculo recto, para poner a la vista su aponeurosis posterior, en un trecho de ocho o diez centímetros. (6) Incisión vertical de la aponeurosis posterior y del peritoneo.

Las ventajas de esta incisión son: Se causa mínimo traumatismo al músculo recto del abdomen y la [illegible] a [illegible]ace en la dirección de las fibras musculares; se evita la eventración postoperatoria, y es más firme la reconstrucción de la pared abdominal.

RÉSUMÉ

L'auteur discute les indications pour la cholecystectomie idéale et décret la modification de l'incision de Sprengel. Cette incision réduit au minimum le trauma du droit abdominal car elle conserve les fibres musculaires. Son emploi assure le fonctionnement complet et la vésicule biliaire et prévient le développement d'une hernie post-opératoire.

Orthopedic Procedures in Therapeutically Induced General Shock and Dislocation of the Hips

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THIS paper really takes up briefly a consideration of two topics, that of orthopedic sequelæ brought about sometimes by cerebral shock treatment of certain psychoses and, because of a certain case in this connection, the subject of central dislocation of the hips.

Recently, there have come to our attention a number of cases of injuries resulting from the tetanic convulsions induced by forms of cerebral shock treatment given to mentally ill patients. The shock to the brain produced by such treatment, whether by the use of insulin, metrazol or strong, induced current, has been found useful in many cases, in the clearing up, in some manner, of disturbing brain cells. It has been found in European investigations that in this avulsion of nerve units a considerably smaller dose of metrazol than that required for one not so afflicted would bring on convulsions in an epileptic individual.

Manic-depressive and involutional psychoses are conditions principally treated by the shock method. It is important to have X-ray studies made before treatment and, as carried out in the Pennsylvania Hospital for Mental and Nervous Cases, after every five convulsive treatments. Hastings, of this institution, points out the importance of excluding cases of bone disease from this form of treatment because of liability to accidents. After applying the electrodes to the sides of the scalp in the case of electro-shock, and measuring resistance (500 to 1200 ohms), he has the patient's arms held at the chest and knees against a firm mattress, a pillow being placed under the thoracic spine, then starts with 400 M.A., 100 V., for 0.2 sec. and, if necessary, increases the time; he places a gauze mouth gag between the jaws. A grand mal results, followed by stupor. In a series of cases at the Pennsylvania Hospital, about two-thirds recovered mentally; fractures and dislocations occasionally occur but not as frequently as with the use of metrazol, formerly employed in mild states.

Compressed fracture of a vertebra or vertebræ is encountered; sometimes only a process is fractured. In one case at the Philadelphia General Hospital following metrazol administration, parts of ten vertebræ were so affected. Fractured humeri and fractured ribs also occur. The surgical treatment of these cases, of course, is such as would be employed when these fractures occur from other causes. We endeavor to reduce them by the use of the Bradford frame for twelve weeks in fracture of the body of the vertebræ (if the patient cooperates) or a body cast (if the patient will not cooperate), and by use of the cast for eight weeks in fracture of the transverse process. Some have suggested the use of an air mattress or the application of a body cast or partial cast as a preventive measure, but it is believed digital restraint is preferable, as harm may be done in too strong a resistance to convulsion. Sometimes a patient may sustain a muscle strain or may complain merely of soreness following X-ray treatments.

A short time ago I was an observer one morning of 10 or 11 such treatments, in only one of which was there complaint of pain after the patient became conscious.

Fracture of part of the pelvis was treated in a patient seen recently. It might be well here to say something about fracture of the pelvis, especially when caused by indirect violence. Most of our fractures of the pelvis, however, have resulted from automobile accidents and are not rare. Ashhurst states that pregnancy may be a predisposing cause of fractured pelvis; it may occur from falls while sitting or standing, from direct violence and from muscular effort. An athlete at the University of Pennsylvania is reported as having broken the anterior-superior spine in a 100-yard dash (the so-called "Sprinter's Fracture"). Some interesting cases seen lately have been fracture of the acetabulum with different degrees of protrusion of the head of the femur into the pelvis—central dislocation of the hip—including the one caused by electro-shock. Skillern (1911) divides cases of central dislocation as to whether penetrating or not, and he quotes one case as occurring from a fall from an airplane.

Central dislocation was described first by Allison in 1788. The 16 cases reported by Eliason and Wright (University of Pennsylvania) were 11 per cent of the pelvic fractures. The secondary centers of the acetabulum appear from the sixth to the tenth year and their lines are visible until the eighteenth year. It is in adults subjected to violence generally applied directly to the great trochanter that central dislocation of the hip usually occurs. In such cases there is limitation of motion in all directions, a decreased prominence of the great trochanter, relaxation of supratrochanteric structures, and the head of the femur may sometimes be palpated per rectum.

Neill reported a case of the head of the femur driven into the cavity of the pelvis long ago (*Transactions of the College of Physicians, Philadelphia, 1853, volume 6, page 267*). It was a girl of 8 years who, in 1844, fell on her knees, resulting in shortening of one lower extremity; she had a second fall, complaining of pain in the knee, and as the report reads: "Strange to say there was no examination of the hip." On the right there was slight rotation outward and abduction, no flexion of pelvis, but a fixed and tender fullness in the groin; this diagnosis was made after her third fall. The treatment consisted of flexion and abduction, traction, and the knees tied together. Of course, X-rays make early diagnosis possible today.

A recent patient seen was a woman 24 years of age who had been struck by a heavy person last September, falling on the right hip and sustaining a central dislocation. She had 40 degrees of flexion of the thigh, 5 degrees of abduction, no internal rotation, and about one-fourth inch shortening. X-ray showed partial central dislocation. She was able to get around with very little pain. Orthopedic oxfords with moderate anterior and main pads, and three-sixteenths inch elevation on the shorter side were prescribed. It was pointed out by Fuller that there is more motion if the opening at the split is large, although in such cases there is liable to be intrapelvic hemorrhage. In these cases there is no tretching of the capsule such as would e found in a genuine dislocation.

Half of the cases, it has been pointed out, are associated with other fractures of the pelvis, and nerve injury occurs in 33 per cent (peroneal, 13 per cent, obturator, 26 per cent, pubic, sciatic). In suspected cases a rectal (or vaginal) examination should be made. Kleinberg stressed the tenderness on lateral pressure. Costa's book gives a good description of this condition.

Kranlein reports a case with both acetabula crushed by a fall on the feet, with the heads of the femora driven into the pelvis. Weights and traction were applied, and consolidation of the acetabulum occurred in six weeks, permitting the patient to go on crutches, with weight-bearing in several weeks more. Immediately after such injury a Thomas splint should be applied for transportation. Attempt should be made at reduction under ether by means of longitudinal and lateral traction and a cast applied, although probably more motion would result from using simple traction, Roger Anderson apparatus, or skeletal traction through the great trochanter (in flexion and adduction).

An interesting case was seen recently in a very heavy woman complaining of pain and difficulty in walking. X-rays revealed a bilateral partial central luxation, and there was profound obscurity as to the etiology. She was helped by a Spica-hip brace. The particular case caused by electric shock was that of a man of 60 suffering from acute manic-depressive insanity and admitted at the beginning of the year to the Philadelphia General Hospital. He was given electric shock treatment resulting in central dislocation of the hip; this was partially reduced by longitudinal and lateral pulls and traction cast were applied, permitting the man to walk out of the hospital in about eight weeks, clear mentally, although quite a number of shock treatments generally are needed.

Maynard of Burlington, Vermont, reported several cases of central dislocation in the *Rhode Island Medical Journal, September, 1940,* and recommends manipulation under ether after coming out of shock of the accident, adduction (after the method of Scudder, 1926, and Keen, 1919), and application of lengthening and outward pulling weights of from 10 to 25 pounds. Murphy used a fulcrum arrangement for pulling the thigh down. Wheeler states that in his cases good function resulted by early treatment; there were excellent results in four out of five cases.

Complications include multiple fracture of the pelvis (53 per cent), fracture of long bones, and hematuria (33 per cent).

SUMMARY

Recently, we have treated a number of orthopedic injuries occurring from tetanic convulsions induced by various forms of cerebral shock treatment given mentally ill patients, such as acute manic-depressive *insanity, dementia praecox,* etc. In this avulsion of nerve units, as used in Europe by the employment of *cardiasol, and in this country* by metrazol, insulin, and strong induction current, the following bodily *accidents have occurred:* Compressed fracture of one or more vertebrae, fracture of vertebral *processes, fractured* humerus, fractured ribs, central luxation of the head of the femur. In one case at *the Philadelphia General Hospital* parts of ten vertebrae were affected.

Attempts are made to minimize these *complications by the use of an* air mattress, holding the patient's arms by his chest and knees against a hard mattress. A *pillow is placed* under the thoracic spine, with the aplication of a partial body cast *before inducing* the convulsions. In some cases only a muscle strain occurs. The usual treatment is given *the ordinary* fracture cases, but in fracture of the acetabulum with central dislocation an attempt is made to reduce it by traction (longitudinal and lateral) under general anesthesia.

SUMARIO

Recientemente hemos tratado un número de casos de traumatismos debidos a las convulsiones tetanicas inducidas durante el tratamiento de ciertas enfermedades de la mente como la demencia precoz, la mania aguda, etc. Durante el empleo de ciertas substancias convulsantes como el cardiasol, que se usa en Europa y del metrazol o de la insulina o de la corriente inductora en este país, se han producido los siguientes accidentes del esqueleto: fracturas de una o más vertebras, o del humero o de las costillas, luxación central de la cabeza del femur. En un caso que ocurrio en el hospital "The Philadelphia General Hospital" partes de diez vertebras fueron afectadas.

Generalmente se trata de reducir el numero de estas *complicaciones* con el uso de colchones inflados con aire, Cojiendo los brazos del paciente por su *pecho* y rodillas contra un colchon duro, se pone un cojin debajo de la espina toracica, con la aplicación de un enyesado *parcial* del *cuerpo* antes de inducir las convulciones. En algunos casos solo se producen contusiones musculares. En general las fracturas simples reciben el tratamiento usual, en cambio las fracturas del acetabulo con dislocación central son reducidas con tracción longitudinal y lateral bajo la anestesia general.

RÉSUMÉ

Récemment nous avons soigné des lésions orthopédiques *résultant de* convulsions tétaniques engendrées par divers procédés de traitement du choc cérébral donnés à des *désequilibrés mentaux:* démence précoce, démence dépressive aiguë, etc. Dans l'avulsion d' unités *nerveuses par l'emploi* en Europe de cardiasol, et dans ce pays par l'emploi de metrazol, de l'insuline, et de fort[illegible] courants électriques, les accidents [illegible]porels suivants ont été notés: fract[illegible] comprimées des apophyses vertél[illegible]es fractures de l'humérus, fractur[illegible] des côtes, et luxation de la tête d[illegible]emur. Dans un cas du *Philadelphi*[illegible] Hospital, dix vertèbres fur[illegible] endommagées. On a essayé de di[illegible] l'incidence de ces complicatio[illegible] l'emploi de matelas à air par la [illegible] bras du malade contre [illegible] Un coussin placé s[illegible] thoraciques avec ap[illegible] cast partiel ava[illegible] de [illegible] convulsions nous a [illegible]

Dans certains [illegible]

qu'un étirement des muscles. Dans le cas de fractures ordinaires on emploi les méthodes usuelles, mais dans les fractures de l'acétabule avec enfoncement de la tête du fémur dans le bossin on réduira la fracture par traction latérale et longitudinale sous anesthésie générale.

Spinal Anesthesia and Its Use by the Continuous Method

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SUCCESSFUL anesthesia has been the foundation on which the present success of surgery has developed. It is no wonder, then, that no ffort has been spared to remove the sagreeable features of general anesiesia and extend the field of spinal anesthesia, thereby reducing the risk and discomfort of the patient, as well as to improve the efficiency of surgery.

Hunicke, in 1891, found spinal puncture could be performed safely. In 1899 Bier injected 2 c.c. of 1 per cent cocaine in his own spinal canal as an experiment. It was later tried by six of his assistants, but many deaths followed, resulting in its abandonment until a less toxic drug could be found. Matas performed his hemorrhoidectomies under spinal anesthesia in 1899. Babcock has been using spinal block for thirty years. However, most of the progress in spinal anesthesia has been made since 1928. Lemmon reported further improvement in its use in 1939—the continuous spinal anesthesia, which will be discussed in connection with the accepted general principles and technic followed.

Over a period of twelve years we have extended its field of application to practically every type of operation below the diaphragm. It has been used successfully in very long operations, and in those cases which result in failure by the usual dose. It is particularly indicated in gastrectomy, colon and rectal resections, operations upon the gall bladder and bile ducts, plastic procedures and pelvic operations.

Lemmon has used continuous spinal anesthesia in 200 cases without failure, and we have had success with it in twelve cases. His observations are that the initial injection of novocaine is more toxic than subsequent ones. These "toxic effects" are evidenced by a fall in blood pressure, sweating, tachycardia, nausea, and vomiting. The symptoms are ameliorated by the use of 10 per cent glucose, lowering the head slightly, and the inhalation of oxygen. If the blood pressure drops below 80, adrenalin or ephedrine may be given, but this has not been found necessary with the use of 10 per cent glucose.

Difficulties in closing abdominal incisions are completely overcome with continuous spinal anesthesia.

The equipment for the use of continu-

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[*] Presented at the Third International Assembly of the International College of Surgeons held in Mexico City, August, 1941.

ous spinal anesthesia is as follows: One rubber covered zipper mattress, five inches thick, eighteen inches wide, and six feet long, with a gap in the pad beneath the lumbar spine; flexible needle; rubber tubing with a capacity of 1 c.c. and a Leur lock syringe, with a two-way stop-cock.

The spinal puncture is made into the second or third lumbar space, with the patient lying on the left side. Six cubic centimeters of fluid are drawn into a 10 c.c. Luer syringe. The needle is plugged and 600 milligrams of novocaine are dissolved in 6 c.c. of spinal fluid. One and one-half to 2 c.c. of the fluid are introduced into the subarachnoid space, and the stop-cock is closed. The patient is turned on his back with the needle remaining in the spine, exercising caution that the needle does not touch anything at any time. If analgesia does not occur in ten minutes, an additional dose is injected.

The level of the anesthetic is controlled by the position of the patient, dilution of the analgesic drug, and the force of the injection. Some patients require much more intraspinal procaine than others. There is no set dose of ether for a given case; likewise it is true in operating under spinal anesthesia. The dose should be given as needed and under control.

Spinal anesthesia is the choice for many operative procedures. The results are not as satisfactory when supplemented by other anesthetic agents. Hence the use of continuous spinal anesthesia obviates their use.

SUMMARY

Properly induced spinal anesthesia, in which any of the approved methods are employed, produces complete freedom from pain in the operative field and relaxation of the muscles. Operative exposure is facilitated. The maximum fall in blood pressure occurs early in the operation, when the patient is best able to stand it. Post-operative vomiting is minimized. Puncture headaches are occasionally aggravating and hospitalization may be prolonged, but ultimate relief is assured. Otherwise no untoward symptoms are experienced, if it is properly administered.

SUMARIO

Anestesia espinal propiamente inducida, en la cual cualquiera de los métodos aprobados es empleado, produce eliminación de dolor completa en el campo operatorio, y relajación de los musculos. Exposición operatoria es facilitada. La maxima en la caída de la presión arterial ocurre durante el principio de la operación, cuando el enfermo es más capaz de soportarla. Los vómitos post-operatorios son mínimos. Dolor de cabeza debido a la puntura son agravantes ocasionalmente y el enfermo puede necesitar más tiempo en el hospital, pero el alivio es seguro. De otro modo no se esperan otros síntomas si la anestesia es propiamente administrada.

RÉSUMÉ

L'anesthésie rachidienne bien administrée assure une absence complète de douleur dans le champ opératoire et aussi un relâchement musculaire. Ainsi on obtient un contrôle du champ opératoire. La pression arterielle baisse au début de l'opération. Les vomissements post-opératoires sont moins fréquents. Les maux de tête consécutifs à la ponction lombaire sont intenses dans quelques cas, mais un séjour hospitalier de quelques jours amène un soulagement complet. Si l'anesthésique est administré selon les règles approuvées, aucun symptôme désagréable ne survient.

La Angiografía Cerebral en el Diagnóstico de las Lesiones Intracraneales*

(Cerebral Angiography in the Diagnosis of Intracranial Lesions)

JESUS MA. SANCHEZ-PEREZ
MEXICO, D. F.

PROFESSOR SANCHEZ-PEREZ has showed lantern slides on cerebral angiography in the diagnosis of intracranial lesions. His conclusions were as follows:

SUMMARY

The history of encephalography is studied and the technic is described. The author insists upon the innocuity of the use of the method. A series of normal and pathologic encephalograms is presented. He affirms that the classical description of the arteries of the brain is different from that shown by the encephalograms. He comments on the velocity of the circulation of the blood in the cerebral vessels and states that by means of angiography it is possible to confirm suspected pathologic entities, as well as to reveal unsuspected ones, and that the method deserves the consideration of an important aid to diagnostic exploration.

SUMARIO

Se hace la historia de la encefaloangiografía. Se describe la técnica: infiltracion de novocaína. Descubrimiento de la Carótida Primitiva. Colocación de la cabeza sobre un seriógrafo. Inyección de bioxido de torio. Al llegar a 6 u 8 c.c. disparar la primera placa; 2 segundos después la segunda; 2½ segundos después la tercera. Se insiste en la inocuidad y utilidad del método. Se presenta una serie de angiogramas, normales y anormales. Se afirma que la descripción clásica de los vasos cerebrales es distinta de lo que muestran los angiogramas. Se aprecia la velocidad de la sangre en los vasos encefálicos. Se afirma que la angiografía cerebral puede tanto confirmar diagnósticos sospechados como revelar insospechados, y que merece pasar a primer plano entre los métodos de exploración del encéfalo.

RÉSUMÉ

L'Histoire de l'angioencephalographie est faite. La technique est décrite: infiltration a la novocaíne, découverte de la carotide primitive. Avec la tête du sujet sur un seriographe, injection de bioxide de thorium. Quand 6 a 8 c.c. sont injectés, la première exposition est faite, la deuxième 2 secondes après, la troisième 2½ secondes après. L'auteur insiste sur l'innocuité et l'utilité de la méthode. Une série d'angiogrammes, normaux et anormaux, est présentée. On affirme que la description classique des vaisseaux du cerveau est différente de ce que montrent les encephalogrammes. La vitesse de circulation du sang dans les vaisseaux du cerveau est appreciée. L'auteur dit que la méthode peut aussi bien confirmer un diagnostic soupçonné que déceler un diagnostic non soupçonné et que'elle mérite de passer au premier plan parmi les procedés d'exploration du cerveau.

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* Presented at the Third International Assembly of the International College of Surgeons held in Mexico City, August, 1941.

The Diagnosis and Treatment of Acute Pancreatic Disease*

FELIX CUNHA, M.D.
SAN FRANCISCO, CALIFORNIA

IT IS not without profit that we occasionally review in retrospect that which was in vogue a decade, two decades, or even three decades ago, and determine whether or not progress has been made in certain phases of our work and still more important, perhaps, whether we have kept pace individually with such progress, if any has been made. It is with such an idea in mind that we review the subject of pancreatic disease and its therapy, spanning a space of time of approximately fifty years.

If we turn back to the year 1892, and accept Osler as most typifying the keen analytic diagnostic mind of that era, we find in the first edition of his *Principles and Practice of Medicine* a summing up of the subject of both acute and chronic pancreatic disease occupying but a scant page of space.

Fifty years later we find a thesis devoted to the subject of the acute phase of pancreatic disease alone, occupying fifty-six pages, and crammed into these fifty-six pages is much information representing the material advance and progress of our knowledge since the bare page of fifty years ago.

Back in the nineties they were able to portray only dramatic features of the acute disease, the sudden onset, the violence of the pain, the extremity of the shock and, above all, a lack of knowledge to properly interpret what was going on—then to adopt an air of futility and to state that pancreatic disease was invariably fatal. It was no fault at all of the baffled medical man, only that science had not progressed sufficiently to give him the facts that he might better comprehend what was taking place before his eyes.

Today the symptoms of the disease have not changed, but our comprehension and understanding of them has, so that the befogged futility has been supplanted by a pride in pointing out that in the acute disease a respectable number of recoveries take place because of our better understanding based upon the increased knowledge we have since gained.

The theories as to the etiology of pancreatic disease are many, but can be reduced to the most plausible. Mechanical factors playing their individual and combined rôles are perhaps the most important. Most of these are based upon the concept that occlusion takes place somewhere along the pancreatic duct system, either in the main duct above or along with the accessory duct, thereby converting a normally open duct system into a closed one and allowing a back flow of pancreatic enzymes into the pancreas itself, with a resulting autolysis. Much elaboration and explanation of this theory has arisen as the result of honest contention.

The significant part played by bile also has been emphasized, particularly when bile escapes outside its normal habitat, in this particular entity into the pancreas itself. The action of trypsin in symbiotic action with bile has been highlighted, trypsin acting as a foregoing digestant of any proteids that might delay bile action or act as a barrier to it, and particular stress has been laid upon possibilities of the bile being infected bile, coming, for instance, from a chronic infected gall bladder.

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* Presented at the Third International Assembly of the International College of Surgeons, held in Mexico City, August, 1941.

Such contention naturally brings to mind the rather high frequency of association of chronic gall bladder disease with pancreatitis—acute or chronic.

Some of the conceptions of the clinical course, especially of the acute disease, have apparently been handed down and accepted by the profession without adequate scrutiny in the light of objective experience.

Illustrative of this is the old description of the pain, "so severe that it did not lend itself to control by morphine." Either the disease has changed or the morphine has become better. True, the pain is severe enough, but it is not agonizing to such a melodramatic degree. The same can be said of the immediacy and degree of prostration. If the older clinicians were correct, how can one account for only a slight rise in pulse rate, not much change in pulse volume and little change in blood pressure volume, or in thermal skin reaction. Agonizing pain and extreme degrees of prostration ordinarily do not go together with the above objective findings.

Perhaps the most important feature of acute pancreatic disease is the correct diagnosis, because on correct diagnosis rests the possibility of truly life-saving measures.

The one measure which has been developed which gives aid to correct diagnosis is the blood diastase estimation. This blood diastase level is of value only in the earliest stages of the disease, its value diminishing correspondingly as the hours pass on.

One dictum can be accepted as fact without equivocation — "elevated blood diastase values are always indicative of acute pancreatic disease provided the clinical picture of acute pancreatitis is evident."

Normal blood diastase value ranges from 80 mg. to 150 mg., averaging 115 mg. In acute pancreatitis this figure may ascend to close to 1,000 or more mg.

The second bit of recently added knowledge to our armamentarium is that the pancreas has demonstrated remarkably inherent recuperative power and that this power is enhanced in the presence of a closed peritoneum. This has forced us into more conservative methods of handling the problem and today we find ourselves doing everything possible to avoid operation in these patients and collected statistics demonstrate that this conservatism is wise and productive of dividends in the form of recovering patients.

After all, let us accept our surgical impotence wherever it may show up. Formerly there was great haste to open the abdomen, that done, what to do next? Little could be done other than the usual insertion of a drain which was in reality a by-passing procedure, more often than not a sop to the surgical conscience.

Chronic pancreatic disease is indeed an intriguing subject—one of which we know little—and possibly in that field lies the answer to the multitude of dyspeptic derangements we see and for which despite detailed tedious study we cannot find a diagnostic label to fit.

With the introduction of small intestine intubation, studies of pancreatic enzyme function has received a much needed impetus and may we confidently hope it will be productive of much knowledge we need in this field.

The use of secretin, as a stimulant to specific pancreatic function, much the same as histamine to the gastric hydrochloric acid secretion, is coming into nore familiar usage, and here again nay we hope for additions to our nowledge.

French clinicians particularly, have ublished reports relative to the use of phedrine in both acute and chronic ancreatic disease, emphasizing that the hysiologic action of ephedrine lends or dapts itself ideally as a counter effect o the pathologic deviation of function ound.

SUMMARY

Our conceptions of the clinical picture of acute pancreatic disease have changed considerably over the past several decades, particularly so in the last one. The development *of the serum diastase determination* as a diagnostic aid and as an indicator of the type of treatment to be followed in acute pancreatitis is a milestone along the path of therapy. Its fuller use should be encouraged. Abandonment of the old surgical dicta of early and immediate operation in favor of conservatism is favored by the preponderant statistical evidence favoring the latter course and evidenced by the much lower mortality rate. The old philosophy of utter despair in the light of recent additions to our knowledge of acute pancreatic disease should be replaced by the confidence of conservatism, backed up adequately by clinical data and statistics based on experience.

SUMARIO

Nuestro concepto del cuadro clinico de la pancreatitis aguda ha cambiado considerablemente durante las últimas décades particularmente durante la última. El uso de la determinación de la diastase en el suero como aguda diagnóstica y como indicador del tipo de tratamiento a seguir en la pancreatitis aguda es una guía en la senda terapéutica. Su uso debe intensificarse.

El abandono de los antiguas reglos quirúrgicas favor del conservatismo, ha mejorado las estadísticas, demonstrando un mejor curso de la enfermedad y una más baja mortalidad. La antigua filosofía de la desesperación, a la luz de los rescientes conocimientos debe ser cambiada por la confianza en el método *conservador*, respaldado por la clínica y estas dísticas basadas en la experiencia.

RÉSUMÉ

Nos conceptions de l'image clinique de la pancréatite aiguë a durante les quelques dernières décades subi de fortes modifications. Un grand avancement dans la thérapeutique de la pancréatite aiguë est dû à l'épreuve déterminante de la diastase du serum. Cette méthode fournet des indications thérapeutiques. L'emploi de cette épreuve mérite d'être encouragé. Il faut abandonner le vieux dictum chirurgical "d'opération précoce et immédiate." Les méthodes conservatrices procurent de bien meilleurs résultats. L'ancienne philosophie de désespoir doit être remplacée par la confiance dans le conservatisme suffisamment soutenu par les résultats cliniques et les statistiques basés sur l'expérience.

Editorial

Medical Education and Surgical Training

In 1919, in the course of an address in New York City by that erudite and Master Surgeon, the late Dr. Charles H. Mayo, he remarked that in the progress of medical knowledge, medicine was then being and must be rewritten to meet the demands of the day and the searching inquiry into cause and effect, etiology and the process of disease, if prevention nd control were to be attained.

hrough the annals of history, it is orded that the evolution of our knowledge has undergone, from time to time, such changes as were provoked by the thinkers and investigators into the mysteries of the ailing body, to clarify the obscure concepts as well as the recognition of changing patterns in the course and variety of morbid conditions. In the physiology of function and the alterations therein due to morbidity, scientific awakening caused inquiry into the primary deviation leading to structural change set up in priority to alteration of function. That is to say, in the origin of disease is the cellular change ahead of functional deviation, or vice versa?

I do not intend to enter upon a discussion of the earliest alterations leading to the process of disease, for that is not relevant to my purpose. I desire instead to draw attention to the searching mental attitude in the leadership of medical education, which rests upon the insistence on basic knowledge as well as adaptability to the task and responsibilities and the ever changing and inexhaustible phases of mental or physical disturbance.

Notwithstanding the embracing dislocation throughout the world resulting from what is now spoken of as a "global" war, the science of medicine in its onward progress has been in no way arrested, or even delayed, by the crushing blows of this sanguinary contest. Instead, experience in the prevention and management of disease and in the rescue and care of the shocked and wounded is increasing from day to day, nay from hour to hour, with astounding rapidity, bringing to light genius in all branches of medicine and surgery.

In the armies, friends and foes throughout the world today are contributing, as well as the conditions permit under which this titantic struggle is carried on, to the vast store and to the perfection of knowledge with their originality. Experiment and research, prevention, sanitation and nursing under military as well as under civil organizations yield fruitful results in preventing loss of life resulting from war and hardship. Furthermore, medical education and organization, and centers of specialization in the management of injury and disease are being disseminated throughout the world as the arsenals of health and the maintenance of physical vigor with preservation of nutritional values and hygiene.

Medical schools and hospitals, medical education, technical training and nursing are on the increase as war production categorically presses its demands upon the medical profession for the prevention of disease, for the treatment of the injured, and for the rehabilitation of the maimed, as essential to an all-out war effort. Europe, Asia and the far-flung theatres of war are activated by the collaboration of medical aid as an essential factor in the conservation of man power, giving full and free genius and originality to the nationalities engaged.

Medical education and training are uppermost in the minds of leaders in educational channels and are receiving a full share of effort and vigilance through the Medical Council of the American Medical Association; closely, too, through the Association of American Medical Colleges, and through state legislation, by medical boards, including of course the National Board. It is the intent and purpose of these various groups dealing with medical standards to regulate and perfect the instruction and practice of medicine in state-wide and national scopes beyond the scholastic realm. Wealthy foundations and liberal endowments give impetus to a vast program of investigation and research in medicine and allied sciences.

No attempt should be made to shield the existence of imperfections and political taint in controlled legislation. Nevertheless, the objectives of these organized councils and boards are well directed and worthy of encouragement and commendation. The proper medical requirements, the curricula and the standardized levels, however faulty, merit further study and cooperation rather than flat criticism or restraint. It is to be hoped that control legislation may deal fairly and squarely with a profession whose inherent and traditional dignity demands freedom from political or centralized regimentation, which destroys originality, initiative and genius.

Aside from the importance of higher qualifications exacted from the aspirants to medical knowledge and training, the character, personality and fitness should be subjected to competent analysis and scrutiny, for the simple reason that the scholastic fitness may be, and often has been, in the higher grades, while the personality, temperament and sundry characteristics totally unfit such an aspirant for the privileges of the healing art. In the interest of humanity, such candidates for the medical profession should be eliminated from the choice of a vocation for which they are not suited.

This attitude in the evaluation of character, temperament and scholastic merits is, later on, in the judgment of professional worthiness, translated into personality, ethics and capability. For these reasons it would seem logical that medical schools, through competent Committees on Admissions, should include in the searching qualifications for admission other requirements of equal importance to the scholastic record of the individual student.

The responsibility of surgical training is of such transcendental importance as to make it worth while to consider the personality of those who through emotionalism and the glare of interest and concentration in the operating room choose to devote themselves to surgical specialties, since these same so-inspired would-be surgeons prove eventually to be actual failures at the bedside. In the opinion of many competent surgeons and surgical authorities such scrutiny may be esteemed exaggeration. However, we ask to deal simply with the deals of character and personality that should distinguish the surgeon, along vith his attainments in the knowledge nd the skill which he may possess. We nake no apology for our observation, lesigned to interest educational leaders o gear their questionnaire into the qualfications of aspirants to surgical training to include personality and ethics, as well as scholastic record.

The International College of Surgeons, n its pledged interest for the development of proficiency among young surgeons, is engaged in a plan for the benefit of its Associates and Members which ffords opportunity under direct supervision for their advancement, by providing world-wide opportunities through the Fellows of the College in all parts of the world, with arrangements furnished by the Chapters of the College in each nation, upon a uniform program of basic linical and operating room training, to eet the specific needs of the candidates.

Scholarships in hospitals under the personal supervision and direction of leading surgeons, not only among Fellows of the College but by reciprocity and courtesy, as well as opportunities for scholarships in Research Foundations and in endowed Fellowships, will be afforded.

The Clinical Guilds organized by all Chapters will serve also as a vehicle of advancement and promotion of basic training, with demonstrations, round table discussions and technical training.

A pathfinding Committee on Post-Graduate Surgical Training for advancement of ranking Associates and Members of the College, appointed at the Fourth International Assembly of the College is at work, and the *Journal* of the International College of Surgeons will, from time to time, through its columns, advise the membership of the post-graduate facilities that are available in all Chapters, and their special features.

Desiderio Román

Assembly Activities

FOURTH INTERNATIONAL ASSEMBLY

In Conjunction with Eighth National Assembly of the

INTERNATIONAL COLLEGE OF SURGEONS

New York, N. Y. June 14, 15, 16, 1943

Desiderio Román, A.M., M.D., Sc.D., F.A.C.S., F.I.C.S., President of the International College of Surgeons (1943-1945).

THE newly elected president has occupied and is the incumbent of many important positions of didactic and clinical teaching in surgery. Among these may be briefly mentioned Professor of Clinical Surgery, Senior Surgeon and Consulting Surgeon of numerous hospitals in Philadelphia and Consulting Surgeon of Memorial Hospital, Wilmington, Delaware.

Dr. Román is a Founder Member of the American Board of Surgery, Charter Fellow and Governor of the American College of Surgeons, Past-president (1940-1942) of the United States Chapter of the International College of Surgeons and Fellow of the American Medical Association. He is also a member of the Philadelphia County Medical Society, Corresponding Member of the American Urological Association, Honorary Fellow of the Argentinian Society of Surgeons, Corresponding Member of the Union Médicale Franco-Ibero-Américaine, and Founder Member of the Pennsylvania Governing Committee of *the Gorgas Memorial Institute and Preventive* Medicine, Inc. He has also been President of the Philadelphia Chapter of the Pan-American Association, Delegate to the Pan-American Sanitary Congress, Washington, D. C. (1907), and Delegate for Nicaragua to *the Fourth International Assembly* of the International College of Surgeons. Dr. Román is a linguist, writer and progressive Æsculapian.

Albert A. Berg, B.S., M.D., F.I.C.S., President-ect of the International College of Surgeons.

DR. ALBERT A. BERG, President-elect of the International College of Surgeons, has had a long career in surgery. Since 1894 he has been connected with Mt. Sinai Hospital, New York City, as House Surgeon, Associate Surgeon, and Surgeon, and since 1934 as Consulting Surgeon. He has been Director of Surgery at Montefiore, Sydenham and Beth Moses Hospitals, and Consulting Surgeon of Monmouth Memorial Hospital, Long Branch, New Jersey, and Barnert Memorial Hospital, Paterson, New Jersey.

Dr. Berg is a National Regent in Surgery of the International College of Surgeons, a Fellow of the New York Academy of Medicine, and a member of the American Medical Association, New York State Medical Association, and the American Gastroenterological Association. He is also a member of the Board of Visitors of the New York State Hospital at Raybrook, New York.

Honors granted Dr. Berg include the Venezuelan Third Order of Bolivar. He is the author of "Surgical Diagnosis" and numerous surgical monographs on diseases of the gastro-intestinal tract. His contributions to surgery of the gastro-intestinal tract as a pioneer and keen observer leaves an enviable niche for him in the annals of Surgery. His contributions to the value of gastric resection versus the much abused gastroenterostomies of a decade or two ago are classic.

EXCERPTS FROM ACTIVITIES OF THE FOURTH INTERNATIONAL ASSEMBLY OF THE INTERNATIONAL COLLEGE OF SURGEONS IN CONJUNCTION WITH THE EIGHTH ANNUAL ASSEMBLY OF THE UNITED STATES CHAPTER OF THE INTERNATIONAL COLLEGE OF SURGEONS, HELD AT THE WALDORF-ASTORIA HOTEL, JUNE 14-16.

Meetings. The final Assembly Committee meeting was held on Saturday, June 12. The International Board of Trustees and Executive Council meeting convened on Saturday, June 12, at 2:00 P.M. The Executive Council meeting of the United States Chapter of the International College of Surgeons was held on Sunday, June 13, at 4:00 P.M., while that of the International House of Delegates was held on Monday, June 14, at 12:00 M., and that of the United States Chapter House of Delegates on June 14 at 4:00 P.M. The General Assembly of the International College of Surgeons met on Wednesday, June 16, at 5:15 P.M., and the General Assembly meeting of the United States Chapter was held on Tuesday, June 15, at 12:00 M.

HIGHLIGHTS OF THE MEETING OF THE HOUSE OF DELEGATES OF THE INTERNATIONAL COLLEGE OF SURGEONS.

The following delegates and representatives were present:

Dr. Alberto Gutierrez (b.p.)
Dr. Alejandro Ceballos (b.p.)
Dr. Felipe Carranza

Dr. Francisco Graña. Vice-president International College of Surgeons.

Dr. Enrique St. Loup B. (b.p.)
Dr. Oswaldo P. Campos (b.p.)
Dr. Cesar Augusto Pantoja
Dr. Hernando Anzola Cubides
Dr. Pablo Gómez M.
Dr. Jorge Castro Duque
Dr. José M. Ortiz Céspedes
Dr. Ernesto R. de Aragon (b.p.)
Lt. Col. Manuel Robiou
Mr. Hamilton Bailey (b.p.)
Dr. Martial Bourand
Dr. Elie Villard
Dr. Rulx Léon
Dr. Manuel A. Manzanilla
Col. Hector Manjarrez Gómez de la Torre
Dr. Manuel Sánchez Garibay
Dr. Francisco Fonseca García
Dr. Esteban Paulin
Dr. Desiderio Román
Dr. Luis D. Alfaro
Dr. Francisco Graña
Prof. Vladimir V. Lebedenko

Dr. George H. Gillen
Dr. Milton Bodenheimer
Dr. Wm. Bates
Dr. Edwin A. Griffin
Dr. Felix Cunha
Dr. John E. Cannaday
Dr. O. H. Hagen
Dr. L. D. Smith
Dr. Custis Lee Hall
Dr. Frank H. Baehr
Dr. Wm. Seaman Bainbridge
Dr. André Crotti
Dr. Rudolf Nissen
Dr. Harold D. Corbusier
Dr. Fred H. Albee
Dr. Wm. D. Ryan
Dr. Chevalier Jackson
Dr. Joseph F. Montague
Dr. Watson B. Morris

Dr. Manuel A. Man-
national College of Sur

Dr. Gilbert F. Douglas
Dr. V. F. Manero
Dr. M. A. Manzanilla
Dr. M. L. Esnaurrízar
Dr. D. F. Fierro
Dr. E. P. Gonzáles
Dr. Gustavo Argil
Dr. L. de la Rosa,
and others

Dr. Albee opened the meeting and alluded to the great satisfaction he experienced at the progress of the College, its increase in membership all over the Western hemisphere, and its scientific activities. This was forcibly brought home to him during his recent visit to South America. He expressed the hope that the official *Journal* of the International College of Surgeons would soon become a monthly publication, and he voiced appreciation for the untiring efforts and devotion of its editor.

Dr. Herman da las Casas, Vice-president International College of Surgeons.

Dr. Custis Lee Hall, Vice-president International College of Surgeons.

The minutes of the meetings of the International Board of Trustees and the International Executive Council of the last International Assembly held in Mexico City, Aug. 11-14, 1941, and the minutes of the International Board of Trustees and International Executive Council held throughout the two years were approved. The Secretary's report, as well as that of the Treasurer and Chairman of the Publication Committee were read and approved.

A resolution, introduced by Dr. William Bates, to the effect that the status of members and associate members who have shown no advance in surgical achievement at the end of five years be reexamined, reevaluated and proper action taken (advancement or rejection), was accepted by unanimous vote.

A nominating committee of five was appointed by Dr. Fred H. Albee to convene for deliberation on June 15 and to present its report at the second session of the House of Delegates' meeting on June 16.

Dr. Rafael Angel Calderón Guardia, Vice-president International College of Surgeons.

The second session of the meeting of the House of Delegates was held on June 16 at 5:15 P.M. in the Perroquet Suite. Dr. Desiderio Román presided. The roll call showed an almost full representation of the House of Delegates. The report of the Nominating Committee was read by its chairman, Dr. Custis Lee Hall of Washington, D. C. The list of officers, members of the Board of Trustees and Representatives placed in nomination follows:

President
Dr. Desiderio Román
President-elect
Dr. A. A. Berg
Vice-presidents
Dr. Francisco Graña
Dr. Manuel A. Manzanilla
Dr. Herman de las Casas
Dr. Custis Lee Hall
Dr. Rafael Angel Calderón Guardia
Dr. Ali Ibrahim Pascha
Dr. Alejandro Ceballos
International Treasurer
Dr. William Seaman Bainbridge
International Secretary
Dr. Max Thorek
Members of the Board of Trustees
Dr. André Crotti
Dr. William Bates
Dr. Albert Gutierrez
Dr. Luis D. Alfaro

Dr. Ali Ibrahim Pascha, Vice-president International College of Surgeons.

Mr. Hamilton Bailey
Dr. J. Heng Li
Dr. Jorge Ge
Dr. Rudolf

INTERNATIONAL COLLEGE OF SURGEONS
FOURTH INTERNATIONAL ASSEMBLY

Assembly dinner, Fourth International Assembly *of the International College of Surgeons,* New York, aldorf-Astoria Hotel.

Dr. Vladimir V. Lebedenko
Sir Hugh Devine
Dr. Dario Fernández Fierro
Dr. Jorge F. Cavelier
Dr. Martial Bourand

Representatives

Dr. Felix Mandl
Dr. Charles Juillard
Dr. Paul Martin

The above named were unanimously elected.

The various amendments to the International Constitution and By-laws, made and approved by the International Board of Trustees and International Executive Council at the various meetings of the International Board of Trustees and the International Executive Council, as recorded in the minutes of the meetings and as published in the March-April, 1943, issue of the *Journal* of the International College of Surgeons were unanimously approved and ratified.

Votes of thanks and appreciation were extended to Dr. Berg and his associates for the excellent program of the Assembly.

Brief addresses were made by the newly elected officers and by many of the delegates. The International Secretary spoke of the origin of the *Manuel Corachán Memorial Lecture in Surgery,* which is to be delivered at every biennial Assembly of the International College of Surgeons.

Fifty delegates participated. About twenty countries were represented either by delegation or representatives.

EXCERPTS FROM THE MINUTES OF THE MEETING OF THE HOUSE OF DELEGATES OF THE UNITED STATES CHAPTER OF THE INTERNATIONAL COLLEGE OF SURGEONS HELD ON MONDAY, JUNE 14, 1943, AT 4:00 P.M. IN THE PERROQUET SUITE OF THE WALDORF-ASTORIA HOTEL.

In the absence of the president of the United States Chapter, Dr. Thomas A. Shallow, Dr. William Bates presided. The approved delegation assembled revealed a fine representation from various parts of the United States.

The minutes of the meeting of the last National Assembly of the United States Chapter, held in Denver on July 15-18, 1942, and the minutes of all the meetings of the Executive Council of the United States Chapter held since that meeting, as well as the changes in the Constitution and By-laws of the United States Chapter of the International College of Surgeons approved by the By-laws Committee under the chairmanship of Dr. J. Rudolph Jaeger and as approved by the Executive Council of the United States Chapter and the International Board of Trustees of the International College of Surgeons and as published in the March-April, 1943, issue of the *Journal* of the International College of Surgeons, were fully approved, accepted and ratified unanimously.

Dr. Thomas Shallow, President United States Chapter.

At the Executive session of the House of Delegates of the United States Chapter, Dr. Jaeger referred to the heading *Specialties* in Article VI of the Constitution, which states: "Specialties recognized as eligible by the United States Chapter are the same as those outlined in Article VI of the International Constitution." Dr. Jaeger suggested that the words "as eligible," referred to in Article VI of the Constitution of the United States Chapter, should be omitted in the printing of the new Constitution and By-laws. This suggestion was unanimously approved.

Dr. Jaeger further called attention to Article 15 of the Constitution under the caption "Board of Governors." He suggested that the first paragraph of Article XV should read: "The Board of Governors shall be composed of [illegible] District Regents." These suggestions were unanimously approved.

Dr. J. Rudolph Jaeger, President-elect Un States Chapter.

The Treasurer's

min Golden), the report of the activities of the Board of Governors (Dr. Fred H. Douglass), the report of the secretary pro-tem (Dr. Desiderio Román), as well as the report of the Chairman of the Board of Examiners (Dr. Moses Behrend), also the report of the Chairman of the Guild Activities (Dr. James C. MacGregor) were read and unanimously approved.

Dr. Bates introduced a resolution that the Constitution and By-laws of the United States Chapter be amended to the effect that the status of the Associate Members and Members should be revised from time to time and proofs offered that progress is being made by the respective members in the acquisition of surgical knowledge. If not progressive, such members may be demoted or dropped from the roster. This was animously carried.

memorial silence for all departed nbers of the chapters was observed.

communication from Dr. Watson B. Morris of Springfield, New Jersey, *re* the post-war activities was read, and suggestions for proper evaluation and action discussed.

THE GENERAL ASSEMBLY OF THE INTERNATIONAL COLLEGE OF SURGEONS, AS WELL AS THE GENERAL ASSEMBLY OF THE UNITED STATES CHAPTER OF THE INTERNATIONAL COLLEGE OF SURGEONS, held their meetings on June 15 and June 16 respectively under their respective presidents, Drs. Albee and Bates (the latter representing Dr. Shallow), and unanimously approved all the actions of their respective Executive Councils, Boards of Trustees and various committees since their last Assembly and ratified and approved unanimously all the actions of these various committees, boards and councils, as reflected in their respective minutes.

At the meeting of the International House of Delegates a Post-War Educational Program Committee of the College was appointed by the Chairman, this committee to consist of Drs. Román and Bates of Philadelphia and Dr. Francisco Graña, First Vice-president, of Lima, Peru.

Dr. William Bates, First Vice-president United States Chapter.

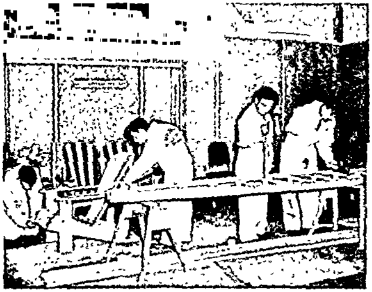
The joint Assembly was a brilliant success. More than 1500 members of the medical profession of the United States and representatives of the armed forces, as well as more than 40 delegates from foreign countries attended. (For the program, see the May-June issue of the *Journal.*)

The excellent papers dealt with war and rehabilitation surgery. Nine members of the Mexican delegation gave an instructive symposium on medical problems of the war. Of particular interest were the round table discussions.

The scientific exhibits were stimulat-

Group of delegates during recess at Fourth International Assembly. Left to right: Dr. Esteban Paulin, Dr. Fonseca Garcia, Dr. Manuel Manzanilla (Mexico), Dr. Wm. Don Ryan (Detroit, Mich., U.S.A.), Dr. Cesar Pantoja (Columbia), Prof. V. V. Lebedenko (U.S.S.R.), Prof. Martial Bourand (Haiti).

At *scientific* exhibits. Left to right: Dr. Francisco Fonseca Garcia (Mexico), Captain J. Gomez Martinez (Colombia), and First Vice-president Francisco Graña (Lima, Peru).


One of the rehabilitation exhibits.

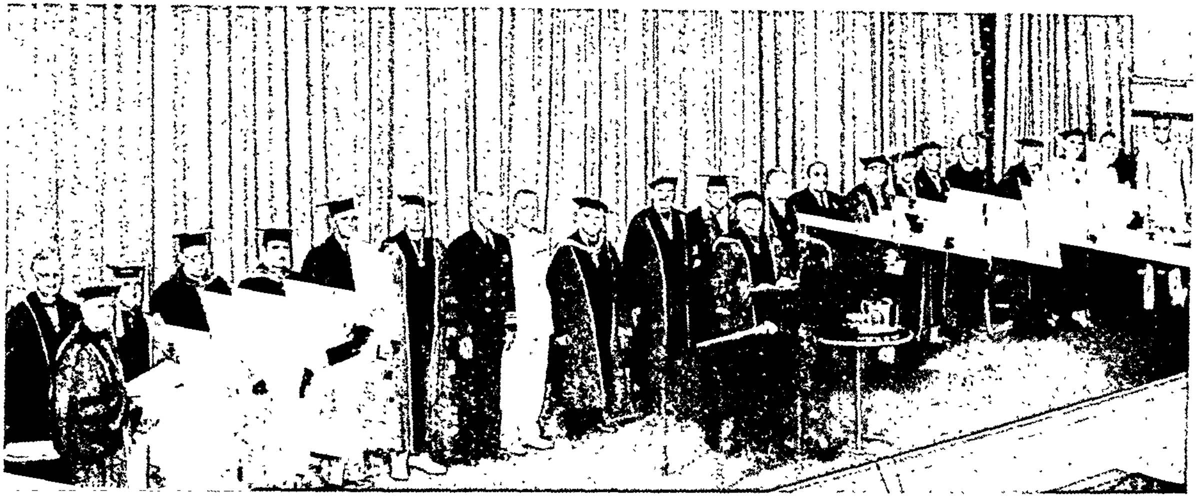
Left to right: Prof. V. V. Lebendenko (U.S.S.R.), His Excellency, Mayor Fiorello La Guardia, and Dr. Fred H. Albee.

ing and instructive (See May-June issue of the *Journal*, pp. 246-47).

The Convocation ceremonies on June 15 were impressive. After the invocation by Rev. Robert J. Gibson, the Convocation was called to order by Dr. Fred H. Albee. Candidates were presented by the International Secretary. Conferring of degrees was followed by the presidential address of Dr. Fred H. Albee. Induction of the incoming president, Dr. Desiderio Román, was followed by his address. *Honorary International Fellowships* were conferred on Surgeon General Dr. Thomas Parran, United States Public Health Service, Prof. Vladimir V. Lebedenko (U.S.S.R.), Col. Manuel A. Robiou (San Domingo). Drs. Henry Lyon Appleby and Erich W. Boak (Canada). J. O. Thompson (China) were admitted to Fellowship.

At the International Dinner the *Cross of Vasco Núñez de Balboa* was conferred on Dr. Fred H. Albee, by Louis D. Alfaro, representing the residen Panama, Ricardo de la

Numerous cabl eg received from tho ld



Convocation scene. In the foreground Dr. Fred H. Albee and in the background officers of the International College of Surgeons.

RADIO-TELEGRAM FROM MOSCOW, RUSSIA, ADDRESSED TO PRESIDENT ROMAN FROM PROF. NICOLAI BURDENKO

Surgical operations within eighteen hours of wounding are normal for early treatment. The maximum time lapse of eighteen hours is the result or achievement of present Soviet organization of the medical service. Self-sacrificing work by stretcher-bearers, orderlies and field surgeons bears evidence of excellent organization, which begins at the clearing stations and which is the product of experience and knowledge. Doctors receive an adequate supply of instruments and medicaments, prophylactic serums and unfailing supply of blood and blood substitutes, which have enabled the medical service to obtain excellent results in the management of the wounded.

Man's future, in the truest sense of the word, appears to be decided in the medical battalion, and it can be said that decisions made there are correct and exhaustive. The secondary treatment of the wounded, where additional treatment is called for, is giving most satisfactory results.

During years of development of Soviet medicine, there have been organized a number of branches or subdivisions of general surgery, such as traumatology, urology, orthopedics, facial plastics and neurosurgery. Separation of these departments from general surgery has resulted in a network of special treatment centers, which has been extended since the beginning of the war. Thus, we have general surgery and traumatologic hospitals, special establishments for the treatment of bones and limbs, for treatment of wounds of the thorax, wounds of the brain and nerves, special departments for eyes and ears. These special establishments stretch out in a hierarchy, from front to rear areas, way back in the interior of the country. Every group of surgeons works out new methods in the special branches and solves the theoretical and practical problems connected with these branches of surgery.

From the early months of the war we have reported the results that 70 per cent of the wounded were returned to the ranks. This percentage has been increased at the present time. We are confronted, however, with a task of great importance, namely, speeding up hospital treatment. We learn that the treatment of a wound does not end with the healing of the same, for we have effects in the scars and tissues, and organs and limbs, and all other ordinary phenomena of incorrectly united bones, immobility of limbs and ankylosis, ugly scars and other skin defects, nerve defects, defects in the bones of the skull, loss of fingers and hands. Complete or partial correction of these defects is still possible.

Russian surgery is so rich in new and original methods of treatment that the problems of plastic surgery and restorative surgery are being solved entirely from day to day in a very satisfactory manner. Special injuries, such as wounds of the lungs, must be treated as isolation cases by surgeons and therapeutists or internists together or in cooperation, while management of wounds of the brains is by surgeons and neurologists. Our favorable experiences in this respect are countless. A few words must be said about our methods dealing with complications during the course of treatment of wounds, such as anaerobic suppuration and infections, tetanus and general sepsis.

It can be said that Soviet medicine has been and still is successfully solving the problems of inoculations with antitoxins, prophylactic injections of both anti-tetanus and anti-anaerobic sera, and by evaluating the use of the sulfanilamide preparations.

Soviet surgeons at the front and behind the lines are devoting themselves entirely to the task of helping the heroic Red Army in its struggle against Hitlerism, mankind's greatest enemy, and we are confident that the day is not far ahead when the dark force of Nazism will be destroyed by the combined efforts of England, America and the United States of Soviet Russia, and the freedom loving peoples will be forever freed of Hitlerite vandalism. We are devoting our strength and our knowledge to the cause of speeding up this victory.

Signed (Nicolai Burdenko)

Correction. In the last issue of the *Journal* on page 196 credit was given for the grant for study of radon ointment in the treatment of indolent ulcers to the Radium and Uranium Corporation of America. As a matter of fact, the Canadian Radium and Uranium Corporation should be credited.

Correction. On page 81 of the January-February issue of the *Journal,* Prof. A. H. Roffo was listed under Córdoba, Argentina. Prof. Roffo is from Buenos Aires.

Correction. In the May-June issue of the Journal the author of the article on "Surgery of Diabetes Mellitus" was inadvertently given as Dr. Manuel H. Manzanilla. The correct name [illegible] Manuel A. M[illegible]a.

Obituaries

Edwin Clyde Henry, F.I.C.S., was born in Iowa in 1870 and died in Omaha, Nebraska, on April 2, 1943. He was graduated from Creighton Medical College in 1895. Following graduate work in this country and Europe, he located in Omaha. In 1914 he took over the old Omaha General Hospital, changing the name to Lord Lister Hospital. The weekly clinics at the hospital were for many years one of the outstanding medical educational features of Omaha.

Dr. Henry, one of the outstanding surgeons in Nebraska, possessed all the qualities of one who inspires his patients. He was a patient and thorough teacher. The thousands of doctors who were is students throughout the years at Creighton University School of Medicine testify as one man to his consistent interest in them.

He was instrumental in arranging for the establishment of the Dr. T. F. McCarthy Endowment of the International College of Surgeons to Creighton University School of Medicine, whereby all Affiliates of the International College of Surgeons in Nebraska may obtain, without charge, a review in the basic subjects of surgery.

He found time to take a prominent part in civic, fraternal and medical activities.

He was held in highest esteem by his colleagues.

George Washington Crile, co-founder of the Cleveland Clinic, professor of Physiology at the University of Wooster, professor of Clinical Surgery at the University of Wooster and Western Reserve University and professor of Surgery at Western Reserve University (1900-1924), died in Cleveland, Ohio, on January 7. He received his A.B. degree from Ohio Northern University in 1884 and his M.A. and M.D. degrees at the University of Wooster, 1887. After the establishment of the Cleveland Clinic in 1924, Dr. Crile's time was divided between travel and biologic studies.

Dr. Crile's early investigations of surgical shock led to the first direct blood transfusion for shock (1905). He was awarded the Cartwright prize in 1897, the Nicholas Senn prize in 1898 and the Alvarengo prize in 1901 for contributions in this field.

His published works include: "Blood Pressure in Surgery" (1903), "Hemorrhage and Transfusion" (1909), "Anemia and Resuscitation" (1914), "Origin and Nature of the Emotions" (1915). Dr. Crile was co-author of "Anociassociation," author of more than 25 monographs and frequent contributor to medical journals.

Many foreign and domestic medical societies honored him with membership, and he was awarded honorary degrees by Hiram College, Wooster, Dublin, and Glasgow Universities. He was President of the American College of Surgeons and the American Surgical Society and a founder of the American Board of Surgery.

Dr. Crile received many medals of honor: American Medicine (1904), National Institute of Social Sciences, Trimble Lecturer medal, Lannelongue International Medal of Surgery, Cleveland Medal for Public Service, American Congress of Physical Therapy, Distinguished Service medal (1919).

In 1921 he was promoted to the rank of Brigadier General in the Medical Officers Reserve Corps. Later he was made a Commander of Bath and a Chevalier of the French Legion of Honor.

Edgar Allen, chairman of the Department of Anatomy of Yale University School of Medicine, died on February 3, 1943. Born at Canyon City, Colorado, May 2, 1892, he completed his undergraduate study at Brown University in 1915, receiving his Ph.D. in

1921, his graduate studies being interrupted by service in World War I, in which he was commissioned a second lieutenant. He was instructor and associate in Anatomy at Washington University School of Medicine, professor and chairman of the Department of Anatomy of the University of Missouri (1923), dean of the University of Missouri School of Medicine (1930), professor of Anatomy and chairman of the Department of Anatomy (1933).

Dr. Allen's researches led to the discovery, with his friend, Dr. E. A. Doisy, of the "ovarian follicular hormone," with which he and Dr. J. P. Pratt at Henry Ford Hospital undertook the first clinical experiments.

Over 140 articles resulting from his original investigations were contributed by Dr. Allen to medical literature. He acted as editor and co-editor respectively to the first and second editions of "Sex and Internal Secretions."

Dr. Allen was a member and president of the American Association of Anatomists, the American Association for the Advancement of Science, the American Society of Zoologists, the Association for the Study of Internal Secretions (president, 1941-42), and the American Association for Cancer Research.

He died on duty in the Coast Guard Auxiliary

The recipient of many honors, Dr. Allen was awarded the honorary degree of doctor of science from Brown University (1935) and Washington University (1942). In 1937 he was made a member of the French Legion of Honor and in 1941 received the Baly Medal from the Royal College of Surgeons of London.

Dr. Howard Atwood Kelly, famed gynecologist born in Camden, New Jersey, February 20, 1858, died in Baltimore on January 12, 1943 He was appointed professor of obstetrics and gynecology in Johns Hopkins University and gynecoolgist-in-chief to the Johns Hopkins Hospital (1889), remaining as professor of Gynecology until 1919, when he became professor emeritus. He received his A.B. degree at the University of Pennsylvania in 1877 and his M.D. in 1882. During 1886-88, Dr. Kelly traveled in Europe.

Dr. Kelly was the originator of new operative procedures in gynecology. Many of his assistants became famous gynecologists. A great naturalist, he was always interested in zoology and botany.

Contributor of 500 articles to medical journals, Dr. Kelly was author and co-author of a dozen books in his chosen field, including a 20-volume "Stereo-Clinic" illustrated by the medical artist, Max Broedel.

Among the honors which Dr. Kelly received was an Honorary LL.D. from the University of Aberdeen.

RECENT DEATHS

Dr. Marshall J. Payne, F.I.C.S., died suddenly and unexpectedly on February 11, 1943, in his home at Staunton, Virginia.

Dr. Hermann Johannes Boldt, emeritus professor of gynecology of the New York Post-Graduate School of Medicine of Columbia University, died on January 13, at the age of eighty-six years.

Dr. Franklin P. Johnson, formerly professor of anatomy at the University of Missouri and since 1929 assistant professor of urology at the Medical School of the University of Oregon, died on February 12 at the age of fifty-five years.

Dr. William Edgar Caldwell, professor of clinical obstetrics and gynecology at the College of Physicians and Surgeons, Columbia University, and associate director of the Sloane Hospital of Columbia University, died on April 1. He was sixty-three years old.

Dr. James Ewing, professor of oncology at the Cornell University Medical College and consulting pathologist at Memorial, Roosevelt and New York Hospitals, from 1913 to 1939 director of Memorial Hospital, died on May 16 at the age of seventy-six years.

Major-General Amin Fahd Maluf Pasha, B.A., M.D. (American University of Beirût), formerly principal medical officer of the Iraq Army, died at his home in Heliopolis, Egypt, on January 21, in his seventy-first year, after a prolonged illness.

Dr. Edgar Allen,
and head of the de
versity School of
3 at the age of fi

Book

Ovarian Tumors. Samuel H. Geist, M.D., Clinical Professor of Gynecology, College of Physicians and Surgeons, Columbia University. 527 pp., 312 figs. Paul B. Hoeber, Inc., New York, 1942.

IN VIEW of the recent increase in our knowledge of the ovary and newer viewpoints regarding ovarian tumors, the author, who had frequently written on this subject, presents a timely monograph. The first three paragraphs on embryology, anatomy and physiology give the reader a fundamental understanding of the material included. With the classification of ovarian tumors of other authorities, the author offers his own "tentative classification" established on a hystogenic basis. Thus, ovarian neoplasms are classified as they originate hystologically from the surface, parenchyma or stroma of the ovary. This includes all the ovarian tumors, benign nd malignant. Subsequent chapters follow more less the author's classification. Non-neoplastic mors and ovarian tumors in children and in gnant women are discussed. The last part of the book is concerned with the diagnosis and treatment of ovarian tumors. The book is well written and will be of service to both teacher and student. The origin of symptoms is clearly explained, and a considerable effort has been made to bring a complete and important subject up to date. A comprehensive bibliography is included with each chapter. This book is highly recommended.

A. Kobak, M.D.

Pain Mechanisms. W. K. Livingston, M.D., Lieutenant Commander United States Naval Reserve, Assistant Clinical Professor of Surgery, University of Oregon Medical School. 253 pp., 26 figs. $3.75. The Macmillan Co., New York, 1943.

THIS monograph discusses the complex and difficult subject of pain in a most satisfactory and simple fashion. It follows the typical Livingston pattern of presenting the subject matter in as simple and comprehensive a manner as possible. Above all, the deductions are aimed to aid the clinician. The first chapter, dealing with the anatomy of "pain pathways" is excellent. In the section dealing with "mirror images" the condition of gout tends to confusion in the example cited by the author. That in reality would not be a true "mirror image." Although not voluminously illustrated, there are enough diagrams to clarify the text. Since every medical man should be concerned with the alleviation of pain, the book can and should be read by student and clinician alike. It can be highly recommended to the profession.

Phil Thorek

Endoscopic Prostatic Surgery. Roger W. Barnes, M.S., M.D., F.A.C.S. 232 pp., with 104 illustrations. $6. C. V. Mosby Co., St. Louis, 1943.

THE increasing enthusiasm of urologists for transurethral resection of the hypertrophied prostate makes this book by an expert resectionist most timely. It is not intended that this book should supplant the teaching and supervision of an experienced operator, but supplement it.

Roger Barnes has produced an outstanding contribution to urologic literature. Not only are the various steps in the technic and preparatory measures fully described and illustrated, but also the various procedures which the usage of experts has accepted as authentic. In the Foreword, Bumpus warns that meticulous preparation of the patient and details of after care are probably more essential to success than in any other surgical procedure. Neglect of either of these factors may nullify the best operative technic and lead to disaster.

The volume is introduced by an interesting chapter by Clyde Collings on the history of transurethral resection. In this superb book, it would be difficult to select any particular part for comment, but there is one sentence (p. 53) which ought to hang prominently over every urologist's and surgeon's desk: "Cystoscopic examination is not necessary for every case under consideration for endoscopic prostatic operation." Failure to recognize this simple but great truth has done untold damage.

Barnes discusses the mortality connected with transurethral resection and points out that while the average death rate at 75 years of age is about 10 per cent per year, it is surprising and gratifying to note an operative mortality of approximately 1 per cent in reports from some of our best clinics; against these satisfactory figures he shows that the operative mortality is somewhere around 5 or 6 per cent for the country as a whole.

The author is conservatively enthusiastic, and wisely cautions that many urologists should adhere to prostatectomy (which they *can* do), and avoid resection (which they *cannot* do).

Bumpus contributes an excellent and quite convincing chapter on punch prostatectomy, in which he makes a strong case for the punch as against the wire loop electrode. *Chacun à son gout.*

This masterful work is worth the studious attention of all present or potential resectionists; in which connection it may be suggested for future editions that a urologist doing resections be termed "resectionist" and not "resectoscopist." The printing is good and the illustrations numerous and excellent for teaching purposes.

A. L. Wolbarst

First Aid. Warren H. Cole, M.D., Professor and Head of the Department of Surgery, University of Illinois College of Medicine, and Lieutenant Colonel Charles B. Puestow, M. C., U. S. Army. 2nd ed. 351 pp., 191 figs. $3. D. Appleton-Century Co., Inc., New York and London, 1943.

THE early appearance of a second edition of this book is the best compliment that can be paid to it. As stated, it is an "advanced guide" to first aid instruction for all medical personnel of the armed and public health services and advanced first aid courses of the lay public. The authors lay stress on the procedures of the American Armed Forces in bandaging, wound cleansing and dressing, splinting, and transportation of the injured. The entire book is well illustrated with diagrams and sketches. Important words and phrases have been italicized to emphasize essential points. Opposite page 198 appears a chart which depicts chemical warfare agents; it gives quick and ready access to the cases, their identification, first aid and field neutralization methods. The entire text emphasizes the fact that the first-aider must know his own limitations and abide by them It seems to correlate the work of the first-aider with that of the physician. Four pages of references are a useful addition. Chapter 19, which deals with medical emergencies, has been very well handled. The book can be recommended highly to anyone interested in first aid, and certainly should be in the library of all those teaching the subject.

P. T.

The Neu [illegible] C. McLellan, M.D., [illegible] ·edical School, Ann A[illegible] ıarts, 9 figs. $4. Charles [illegible], 1943.

THE author has correlated the ever-growing literature on the subject of cystometry and presented it in a readily understandable form. He emphasizes the neurologic character of cystometry by defining it as the study of the physiology of the bladder muscle and its abnormal behavior in relation to disease of the central nervous system.

The anatomy and physiology of the nervous system affecting the function of micturition are thoroughly considered and illustrated by excellent and informative drawings. The results of animal experimentation are fully described.

This monograph will prove of interest to the urologist as well as the neurologist, both of whom deal with the problems of the neurogenic bladder resulting from disease located in the nervous system.

There seems strong evidence that both the ascending and descending nerve pathways serving in bladder physiology lie in the anterolateral columns and in close approximation to each other. It would appear that interference in a small degree with these two pathways is as effective in interrupting bladder sensation and destroying supranuclear control, as is complete transection of the cord above the sacral segments.

The differential diagnosis between neurogenic and myogenic vesical dysfunction is clearly presented. A careful study of this section of the monograph by younger surgeons would prevent unnecessary surgery involving the prostate and the vesical neck.

An appendix presents a synopsis of 100 neurogenic bladders with pertinent data of interest. The book is highly recommended

A. L. Wolbarst

The Inner Ear: including Otoneurology, Otosurgery and Problems in Modern Warfare. Joseph Fischer, M.D., Staff Member, Beth Israel Hospital, Boston, and Louis E. Wolfson, Instructor in Ear, Nose, and Throat, Tufts Medical School. 421 pp. 77 figs. $5.75. Grune and Stratton, New York, 1943.

THE authors have condensed and clarified many phases of the diagnosis and treatment of diseases of the inner ear. The book is clear cut, well written and contains little of a controversial nature. The subject matter is well integrated and designed to provide the experienced otologist with a comprehensive understanding of the subject. Altogether this is an admirable treatise dealing competently with a subject of practical and theoretical importance.

William Lawrence Gatewood

Renal Lithiasis. Charles C. Higgins, M.D., Cleveland Clinic, Cleveland, Ohio. 140 pp., 18 figs. $3. Charles C. Thomas, Springfield, Ill., 1943.

IN THIS pocket-sized volume of 140 pages, the author has condensed the results of a ten years' study of the etiology and treatment of renal lithiasis. He reports convincingly on his study of the relationship between a diet deficient in vitamin A and the formation of renal and bladder stones. The details of his experimental work have the zest and flavor of a scientific romance. He demonstrates that in vitamin A deficiency, the essential conditions for calculous formation are produced.

Experiments on chickens fed principally on ground white corn (instead of yellow corn) showed that after two to five months, urates and fine particles of sand were present in the kidneys and urates and uric acid concretions in the ureters.

In experiments on rats, both kidney and bladder stones were dissolved when vitamin A was added to the diet. If renal function was impaired or infection was present, a longer period of time was necessary for the stone to disappear. In dogs, also, dissolution occurred by strongly acidifying the urine

Higgins relates a striking incident of a boy with a staghorn stone in the right kidney. Permission for surgical removal was refused because after five operations for calculous disease in four years, the stone was not producing symptoms. Two large bladder stones, removed by cystolithotomy, were found to consist of cystine. A high vitamin A, alkaline ash diet was administered, and complete dissolution of the kidney stone occurred in 11 months. For six years the boy was kept free from urinary lithiasis, and the author was then granted the unusual permission to produce a kidney stone. This was done by means of a high purine, vitamin A deficiency diet, and a small stone was produced in five and a half months. This stone was then dissolved by the high vitamin A, alkaline ash diet, and the boy has remained free from stones since that time. A cystine stone was thus deliberately produced and dissolved in a human.

The author believes that vitamin A deficiency is more prevalent than is generally supposed and because of its frequent association with renal lithiasis, he urges that a biophotometer test be made as a routine procedure. He concludes by stating that he has produced seven different varieties of stone and that he has collected a series of more than 40 cases in which dissolution of stones has occurred, with roentgenographic confirmation. A number of diets and a good reference index are appended. The illustrations are well done.

Despite typographical errors, which occasionally mar the excellently written text, this book is a valuable contribution to our knowledge of renal lithiasis.

A. L. Wolbarst

Surgical Practice of the Lahey Clinic. By Frank H. Lahey, M.D., and Staff. 897 pp. 376 fig. $10. W. B. Saunders Co., Philadelphia, 1941.

THE volume consists of a number of papers, most of them already published, from the Lahey Clinic. They represent a cross-section of the work, classified into nine d[illegible], of th[illegible] during the past three years.

visitors to the Clinic up to date and to afford information on various operative technics to other surgens.

The contents include surgery of the thyroid gland, esophagus, larynx, trachea and lungs, breast, stomach, duodenum and small intestines, the biliary tract, the large colon, the pelvis, the kidney and prostate gland, the bones and joints, spinal cord and nerves, and anesthesia.

Lahey is the author of most of the nine chapters on the treatment of diseases of the thyroid, the chapter on [illegible] being especially noteworthy. The [illegible] ussions of the management of hyperthyroidism complicated by other conditions, recurrent hyperthyroidism, and the treatment of the "thyrocardiac." The statistics on carcinoma of the thyroid are especially encouraging. A classic chapter on esophageal diverticula should also be mentioned.

He is also an important contributor to the chapters on the upper abdomen, for whose disorders he prefers partial gastrectomy, condemning gastro-enterostomy still more emphatically than he has done previously. There is a complete description of the technic of subtotal gastrectomy for ulcer.

Fourteen chapters, comprising about 150 pages, describe diseases of the colon, sigmoid and rectum. The chapters on the kidney and prostate gland are especially fine.

There are twelve chapters on the brain, spinal cord and nerves, and a surprisingly large section (10 chapters) on anesthesia, which describes some of the newer methods.

Operative technics described have stood the test of time, the articles are clearly written, and the 376 illustrations add to their comprehension.

This book is refreshing, and is a help and safeguard in many operative procedures. It is highly recommended by the reviewer.

Max Thorek.

On Growth and Form. By D'Arcy Wentworth Thompson. 1095 pp. The Macmillan Co., New York, 1942.

THIS superb work, first published in 1916, and now appearing in a revised edition, deals with the biologic problems of growth and form, and form and function, in their necessary relation to physical principles and mathematical laws. The present edition has been carefully revised, reset and enlarged. The result is a work of unusual interest, not only to the physician and surgeon who deal with disturbances of human function, but to the intelligent layman as well.

The subjects dealt with are many and varied—too much so to justify more than mere mention in a brief review, but all tend to point to the marvelous works of Nature and the simplicity of her ways, if only we undertook the trouble to study them.

Of exceptional interest are the chapters on the internal form and structure of the cell, the rate of growth, on concretions and skeletal structures, on the spiral shells and the way they are built, on the shape of horns, teeth and tusks and their relation to torsion, on the shape of eggs and other hollow structures—all of which indicate the existence of simple natural laws which determine shape, structure and function. As the author says, the book has been written "as an easy introduction to the study of organic form by methods which are the commonplaces of physical science, which are by no means novel in their application to natural history, but which, nevertheless, naturalists are little accustomed to apply." Simple cases are dealt with and the mathematical methods introduced are of the easiest and simplest kind.

The book is excellently printed and bound and may be recommended as a medium for mental relaxation and intellectual stimulation for the hard-worked physician and surgeon.

A. L. Wolbarst.

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to Have and to Hold

Keep Her Forever Safe and Strong

BUY MORE AND MORE WAR BONDS AND STAMPS

Indications and Technic of Bronchoscopy*

CHEVALIER L. JACKSON, M.D., F.A.C.S., F.I.C.S.
PHILADELPHIA, PA.

THE bronchoscope, first developed as an instrument with which to remove foreign bodies (Fig. 1) lodged in the bronchi, soon proved its usefulness in the diagnosis and treatment of bronchial disease. This is not surprising, since it is merely a bronchial speculum, and specula have always been of great value in the diagnosis and treatment of disease of the organs to which they afford access. Today a very small percentage of the bronchoscopy done is for the removal of foreign bodies.

One way to consider the indications for bronchoscopy is to indicate the symptoms that may call for bronchoscopy in the effort to arrive at a diagnosis. For instance, an unexplained cough, unexplained hemoptysis, a wheeze or other sign of bronchial obstruction, calls for bronchoscopy among other studies. Signs of obstruction, such as a wheeze, or the signs of an obstructive emphysema or an obstructive atelectasis, are the most definite indications.

Bronchoscopy is also indicated in different clinical conditions such as pulmonary abscess, bronchiectasis, empyema, asthma, obstructive atelectasis, tuberculosis, benign and malignant tumors.

Pulmonary Abscess.—Sometimes bronchial obstruction of one kind or another, a foreign body, tumor (Fig. 2), or inflammatory stenosis, is present in pulmonary abscess, and in these cases it is extremely important to discover and eliminate the obstruction. Routine diagnostic bronchoscopy is, therefore, indicated in pulmonary abscess. In connection with the treatment of pulmonary abscess, however, many cases will require external surgical drainage. Furthermore, surgical drainage should not be postponed if response to conservative treatment, including bronchoscopic aspiration, is not prompt (Fig. 3). But it is a mistake to regard bronchoscopy and surgery as competitive or opposed methods of treatment. We should think not of bronchoscopy *versus* surgery, but of bronchoscopy and surgery *versus* the disease. Bronchoscopy constitutes an integral part of both the medical and the surgical, or both the conservative and the radical, treatment of pulmonary abscess (Jackson and Judd[1]).

Bronchiectasis.—It must be understood, first, that bronchiectasis ordinarily cannot be accurately diagnosed without the use of contrast media, such as lipiodol (Fig. 4). (Jackson and Bonnier[2].) In a few cases, apparent bronchiectasis has proved to be "reversible," and has disappeared after a series of bronchoscopic aspirations. But if these cases are to be found in time to bring about this result [illegible] persuade the [illegible]

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* Presented at the Third International Assembly of the International College of Surgeons held in Mexico City, August, 1941.

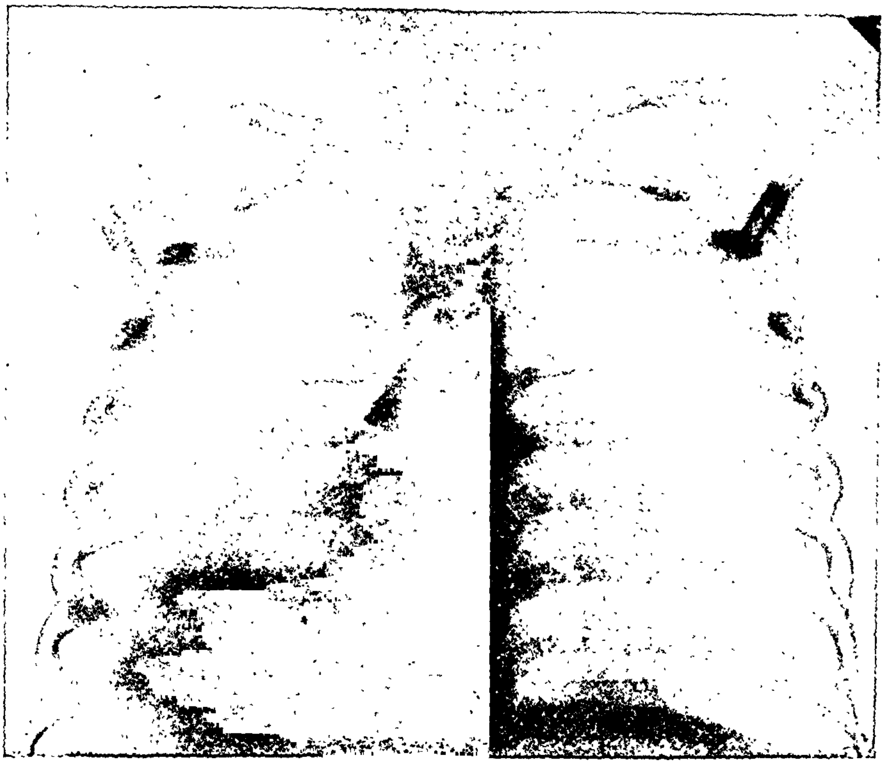

Fig. 1. Foreign body (screw) in right bronchus. In this case a diagnosis of asthma had been made because of a wheeze.

tance of early bronchoscopic treatment in all cases of "colds that do not clear up," "unresolved pneumonias," and similar conditions.

In chronic, well-established bronchiectasis with profuse foul sputum and hemoptysis of varying severity, bronchoscopic treatment can be of considerable palliative value, but the only hope of curative treatment is by lobectomy or pneumonectomy. Preoperative and postoperative bronchoscopy is of great value to the surgeon in these cases, however, and bronchoscopic aspiration should also be used when operation is contraindicated by the extent of the disease or

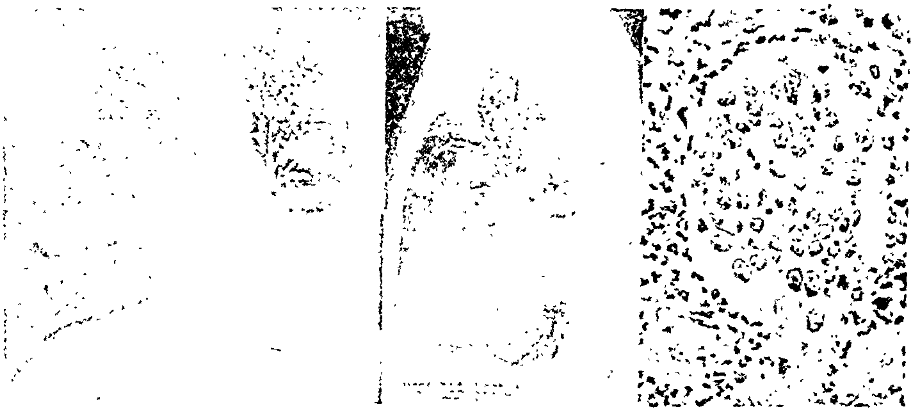

Fig. 2. These films show a pulmonary abscess in the lower lobe of the left lung. Lipiodol demonstrated *bronchial obstruction by malignant neoplasm.* This diagnosis was confirmed by bronchoscopic biopsy.

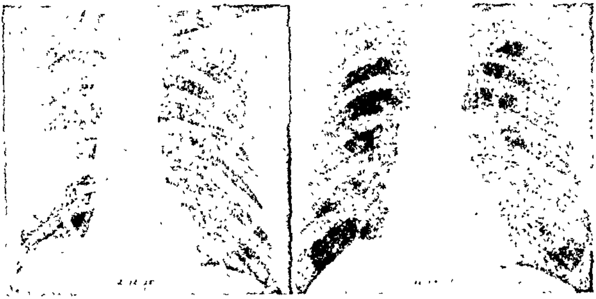

Fig. 3. Pulmonary abscess following a cholecystomy under ether anesthesia. Complete clearing took place in about two months under conservative treatment, as shown by film to the right. This patient received nine bronchoscopic aspirations.

by the patient's general condition.

Empyema.—An empyema cannot be adequately drained through the bronchus, even when there is a bronchopleural fistula, but bronchoscopic observations have shown that bronchial obstruction of one kind or another may be present as an etiologic or perpetuating factor. In some of our cases the obstruction has been produced by a foreign body, in one by a broncholith, in others by inflammatory or tuberculous bronchial stenosis and in still others by benign and malignant tumors. Because of these observations I believe that most patients with empyema should have at least one diagnostic bronchoscopy. Certainly, in any case in which the usual surgical procedure of drainage is not followed by a prompt and permanent healing, bronchoscopy should be done.

Asthma.—In some cases of bronchial asthma there is a considerable amount of viscid secretion present in the tracheobronchial tree and the aspiration of this material may afford marked symptomatic relief. In my experience, however, it has generally seemed best not to do bronchoscopy during the asthmatic attack. The administration of an autogenous vaccine prepared from a bronchoscopically removed specimen of bronchial secretion has often proved of value.

Obstructive Atelectasis.—We learned about the diagnosis and treatment of obstructive atelectasis first from the foreign body cases but, as in so many other instances, our bronchoscopic and bronchologic observations soon found wider applications. The first form of obstructive atelectasis of other than foreign body origin to be recognized was the

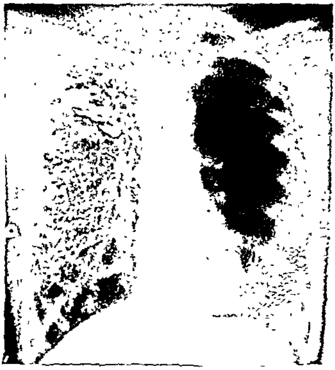

Fig. 4. The bronchoscopic [illegible] was [illegible] for instillation of lipiodol [illegible] [illegible] life in this case.

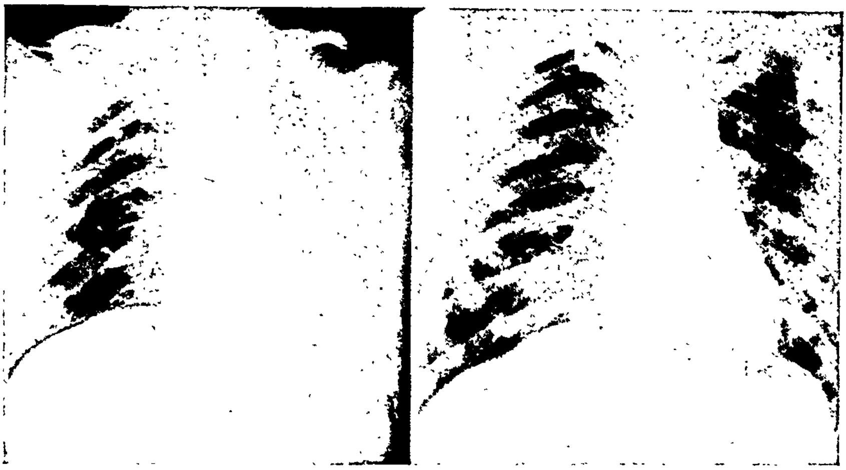

Fig. 5. Post-operative massive atelectasis of left lung following left sacroiliac arthrodesis. Note complete clearing of lung field (film right) after bronchoscopic aspiration of thick secretions.

post-operative variety (Fig. 5). It was found that the commonest post-operative pulmonary complication was not a pneumonia but an atelectasis, easily curable by bronchoscopic aspiration, and preventable in most cases if certain precautions were taken with potentially susceptible patients. It was soon recognized that many intrabronchial lesions of inflammatory or neoplastic character may also produce atelectasis. Most recently, we have come to recognize the importance of the lobar or segmental atelectases occurring during acute respiratory infections.

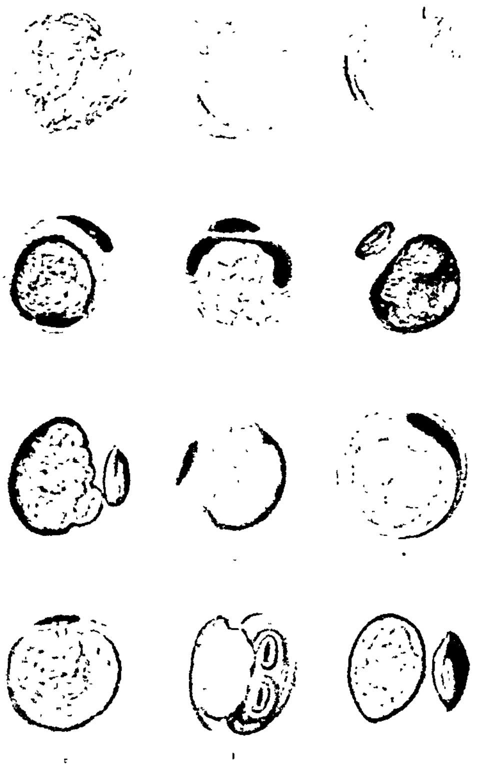

Fig. 6. Bronchoscopic views of a series of cases of bronchial adenoma (Jackson and Konzelmann[1]).

Physicians and pediatricians could prevent the development of chronic bronchopneumonitis in later life if they would see to it that no patient is discharged as cured until the entire chest is clear by both physical and roentgen-ray examination. A few bronchoscopic aspirations at the proper time would cure these acute atelectases and be prophylactic of intractable and incapacitating bronchopulmonary disease of later life.

Tuberculosis.—Until a few years ago, bronchoscopy was thought to be contraindicated in tuberculosis, although it was known that the lesions of tuberculosis were not restricted to the parenchyma. Gradually, more and more cases came to be reported in which bronchial lesions were visualized bronchoscopically and described. It was found that there were no untoward effects of skilfully performed bronchoscopic examinations in the tuberculous patient. It came to be realized that the study of the tuberculous patient with the slightest symptom or sign of a bronchial lesion was incomplete if bronchoscopic examination was not carried out. Furthermore, it was found that in many cases local treatment was of value.

The bronchial lesions of tuberculosis are chiefly either flat ulcerations or "ulcerogranulomas." The former should be treated with silver nitrate (35 per cent), the latter with electrocoagulation. If the ulcerogranulomas are large, and especially if they are pedunculated, they may be partially removed with forceps and then coagulated.

I believe that the presence of a tuberculous bronchial lesion associated with non-tuberculous suppuration should be regarded as a contraindication to collapse therapy, but the presence of a bronchial lesion in a patient without evidence of suppuration should probably not be regarded as a contraindication.

In children we frequently see bronchial obstruction produced by compression from peribronchial lymph nodes, and in some of these patients the tuberculous node has intruded into the bronchial lumen. In some patients only a wheeze is produced; in others an obstructive emphysema, and in still others an obstructive atelectasis. Bronchoscopic treatment is almost always indicated for the relief of obstruction in such cases.

Benign and Malignant Tumors.—Bronchial tumor should always be suspected when there are signs of bronchial obstruction without a history suggestive of foreign body. If there is also hemoptysis, the suspicion is so much the greater. These signs call urgently for diagnostic bronchoscopy. If a tumor is visualized, the gross findings will often justify a tentative diagnosis as to the nature of the neoplasm, and tissue may be taken for biopsy.

Among the benign tumors most frequently encountered, we might mention first the so-called bronchial adenomas (Jackson-Konzelmann[3]). These tumors

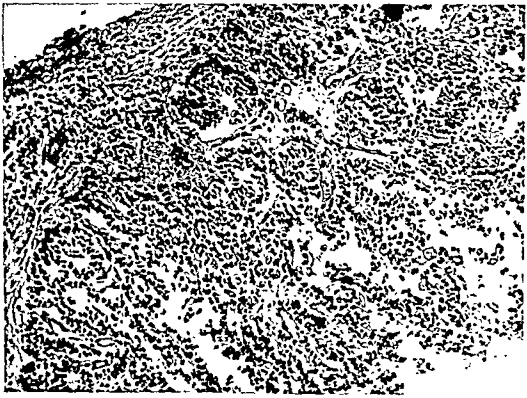

Fig. 7. *Typical histopathologic process of so-called* "benign [illegible] the bronchus. Note imperfect attempt at gland formation, absence of figures and comparative regularity of size and shape of cells.

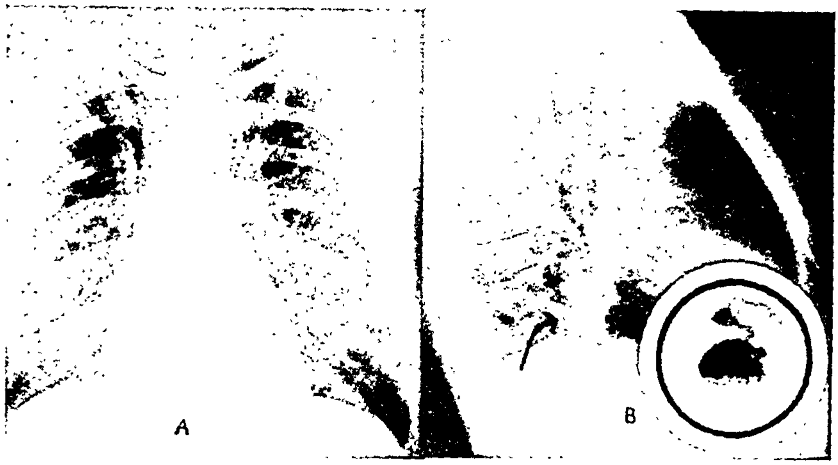

Fig. 8. Diagnostic bronchoscopy is indicated by the presence of a partial atelectasis of the right lower lobe in this case. Note value of lateral film in this case. The diagnosis of carcinoma was confirmed by bronchoscopic biopsy.

affect chiefly young or middle-aged females, and they are characterized by hemoptysis associated with signs of obstruction (Fig. 6). The final diagnosis is made by biopsy, although the histopathologic diagnosis is sometimes difficult, and should be checked by a pathologist who is thoroughly familiar with these particular tumors (Fig. 7).

Many other benign tumors are seen in the bronchi, but none so commonly as the adenomas. Among the other benign tumors seen are papillomas, osteochondromas, lipomas, and neurofibromas.

Of the malignant tumors, carcinoma is by far the commonest, and in about 75 per cent of the cases it involves a bronchoscopically accessible bronchus so that the diagnosis can be confirmed by bronchoscopic biopsy (Fig. 8). If the accessible portion of the bronchial tree is normal, so much the better for prospects of operability; but in such cases no time should be lost in doing a needle or "aspiration" biopsy, if the roentgenographic and clinical findings point to carcinoma as the most probable diagnosis, so that the patient may have the benefit of prompt resection of the lobe or lung involved.

Bronchoscopic treatment is curative in most cases of benign tumor, although in some cases more radical measures may be required. Extensive local tumor with sessile attachment, extrabronchial extension, bronchiectasis or other suppurative disease of the distal portion of the bronchial tree and lung—these are some of the conditions which may justify lobectomy or pneumonectomy for bronchial adenoma or other benign tumor. In the presence of an inoperable tumor, either benign or malignant, bronchoscopic treatment may be indicated to prevent or postpone the consequences of obstruction.

TECHNIC

Anesthesia should be considered first, and I emphasize the fact that while general anesthesia may be justified in certain cases, there are overwhelming advantages in developing a technic that will make it possible to use only local anesthesia (Jackson and McReynolds[1]). This will, in the long run, greatly lessen the risks of bronchoscopy and widen its indications. For children no anesthesia, general or local, is used; for adults, first a pharyngeal spray of cocaine, 4 or 10 per cent; pontocaine, 2 per cent, or larocaine, 10 per cent, and then fractionated intralaryngeal instillations of the same solution, using a syringe with a long curved tip under the guidance of the laryngeal mirror. A preliminary sedative, for example, either morphine with atropine or one of the barbiturates, such as nembutal, should be given, at least in the case of new patients. The barbiturates are particularly desirable if cocaine is to be used, because they counteract the toxic effects of the drug.

Position of the Patient.—The patient is placed in the recumbent position, with his shoulders just beyond the end of the table, and the head supported by a trained assistant. The neck and shoulder muscles should be relaxed as completely as possible. The head is elevated well above the level of the table top, and then extended at the occipito-atloid and atlanto-axial joints (See Jackson and Jackson[6]).

The laryngoscope may be used to expose the larynx, and the bronchoscope passed through it, or the bronchoscope may be introduced directly into the larynx without using the laryngoscope. In either case the instrument is passed back over the tongue, preferably a little toward the right angle of the mouth, until the crest of the epiglottis is visualized. The epiglottis is lifted forward, gently but firmly, and the instrument advanced until the cords are reached. The bronchoscope is then insinuated through the glottis, care being taken not to damage the arytenoid cartilages or the posterior commissure.

The landmarks of the tracheobronchial tree are the vertical carina or bifurcation, then the vertical right upper lobe spur, the horizontal middle lobe spur, and the various spurs of the segmental bronchi of the right lower lobe; on the left side, the diagonal upper lobe spur and the various lower lobe segmental spurs which are similar to those on the right. In order to correlate the endoscopic findings with the roentgen findings and make a significant report, the endoscopist should know what areas of lung are served by the various lobar and segmental bronchi whose orifices he sees (Jackson and Huber[7]).

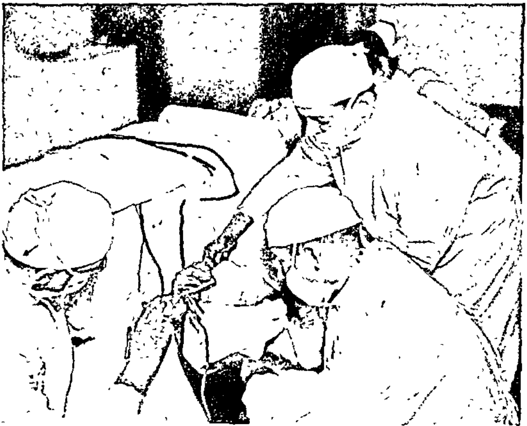

Fig. 9. Bronchoscopic aspiration. Note the "team" consisting of endoscopist, head-holder and shoulder-holder.

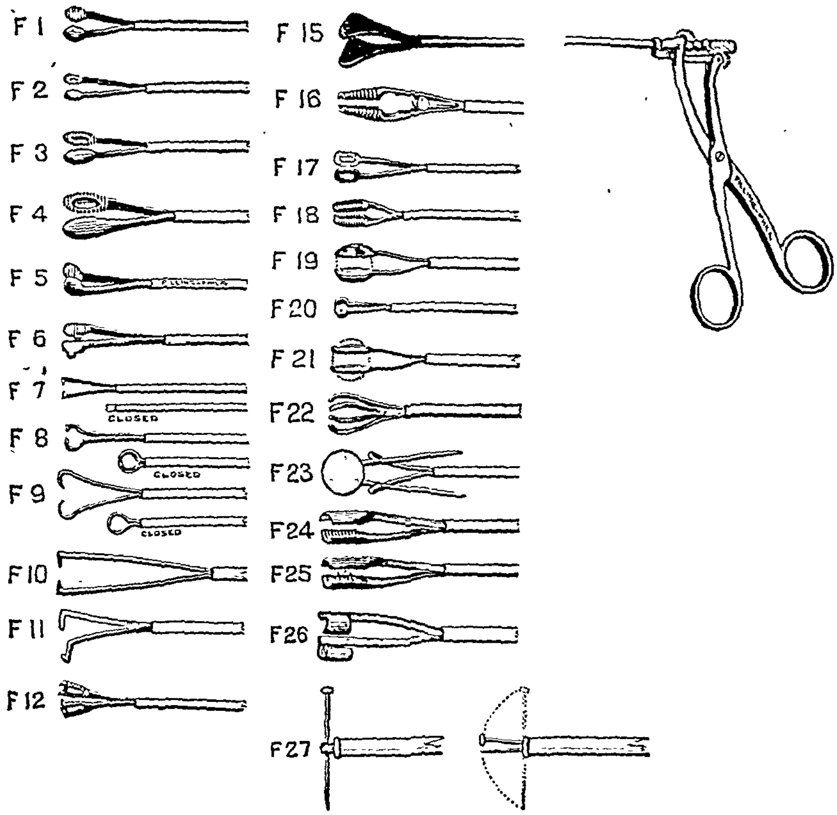

Fig. 10. Various forceps used for the removal of foreign bodies, taking tissue for biopsy, dilating strictures, and other manipulations through the bronchoscope.

Once the bronchoscope has been introduced, the position of the head depends entirely upon the portion of the bronchial tree being explored. It may be lowered, or taken to the right or to the left. Throughout the procedure it is important that the head-holder maintain the proper balance between flexion and extension so that the tube will not bind. Some endoscopists prefer to dispense with the head-holding assistant and use instead some sort of mechanical head rest, but in any case the principles are the same and the same positions are necessary (Fig. 9).

Use of Instruments. One of the fundamental points to remember in peroral endoscopy is to avoid pinching the lips or tongue between the instrument and the teeth. This will cause more discomfort to the patient than anything else in the whole procedure.

The technic of the use of various kinds of forceps (Fig. 10) in solving the varied mechanical problems presented by foreign bodies in the bronchi is too large a subject for the scope of this paper, but this topic has been treated extensively elsewhere (Jackson and Jackson[5, 6]).

The other special instruments used through the bronchoscope include various kinds of straight and flexible aspirators, dilators, and electrodes. The last are preferably passed through a special model of the Jackson bronchoscope such as that used by Kernan, which has a special channel made for the passage of the electrode. With this type of instrument the endoscopist is able to work more accurately because he can see exactly what his electrode is doing.

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SUMARIO

El autor de este artículo trata sobre las indicaciones y técnica de la broncoscopía. Las indicaciones están enumeradas de una manera tan concisa y clara que hacen de este artículo un trabajo de inestimable valor práctico.

SOMMAIRE

L'auteur décrit les indications pour la bronchoscopie et discute *in extenso* les différentes conditions cliniques dans lesquelles son emploi est utile, tel que l'abcès pulmonaire, la bronchectasie, l'empyème, l'atélectasie obstructive, la tuberculose, les néoplasmes du poumon bénins et malins. Il nous décrit la technique qu'il emploie, la position préférable du malade et les instruments qui lui paraissent les plus appropriés.

Выводы

Автор указывает поводы к бронхо-скомическому экзамену при различных клинически состояниях, как пульмональный абсцес, бронхиектаз, эмпиема, одышка, ателектаз, бугорчатка, доброкачественныя и злокачественныя опухоли. При чем описывается техника, позиц[illegible] и употребляемые инструменты.

Digitalis in the Treatment of Wounds*

By KARL SCHLAEPFER, M.D., F.I.C.S.

MILWAUKEE, WISCONSIN

THE glucosides of digitalis are regarded as acting primarily only on the heart muscle. Early in homeopathy, the theory was put forth that digitalis had also a general systemic effect (Fahrenkamp). Von Bergmann, Baron and others assumed a peripheral action of the drug because it controlled the permeability of the cells in the wall of the capillaries. Following the administration of digitalis, a diminished viscosity of the blood plasma was noticed. Transudation through the capillary walls was reduced due to altered permeability of the vessel wall. Thus "serous" inflammation of Eppin[illegible] was reduced.

Baron studied this effect of the digitalis glucosides by local application to wounds, particularly on those which did not yield to the standard methods of treatment.

In 1785, Withering, the father of digitalis therapy, already mentions the importance of digitalis in the treatment of wounds. Kazda, 1924, observed better healing of wounds which were under tension or otherwise endangered in their nutrition by injectio[illegible] digi[illegible] (digipuratum), if repe[illegible] the temples was [illegible]

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*Read before the Milwaukee Society of Clinical Surgery on March 24, 1942.

used digitalis glucosides on plants. He observed increased growth and prolonged preservation for plants thus treated. Baron made extensive clinical trials with local application of digitalis in the form of solutions and salves. As solution, Baron used at first a digitalis infusion (fol. digit. pulv. titr. 10; Aqu. dest. ad 1000.0). This infusion proved unstable, so he substituted digipuratum (Merck), a stable preparation free from any undesirable toxic side products. He used it as a 10 per cent solution for compresses or as a 20 per cent ointment. (digipuratum liq. 10.0 Vas. Alb., Lan. anhydr. aa. ad 50.0). A 10 per cent ointment proved superior to the higher concentration (20 per cent) in the later
sta ge of th reatment when only a small
defect in l of epithelial covering was
present on suggested addition of
dextro he ointment as a beneficial
adju ever, he did not follow up
this clinically. Wounds with
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d pplication of dextrose or

On ered the wound with com-
duce rated with 10 per cent digi-
enti on (digipuratum). To assure
chi mpness, sterile cotton soaked
lov same solution was put over the
le ss, which in turn was covered
p ellulose and fixed *in situ* with a
t age. The intact skin adjacent to
wound was protected from macera-
n by a layer of sterile zinc oxide oint-
ent. The dressings were changed every twenty-four hours.

When using the digitalis ointment, the dressings were changed every day, in cases of fresh burns every other day. If the wounds had been treated first with digitalis compresses, the ointment subsequently was left on for a week. The intact skin was always protected with zinc oxide ointment. In cases which necessitated plaster-of-paris casts, the ointment was left on for weeks.

In our work we employed digalen (Roche*) in ampule form for the compresses. For ointment, we applied a 20 per cent digalen ointment with Baron's technic.

Baron used the digitalis treatment on the following types of wounds: infected postoperative (12); infected post-traumatic (7); burns (8); carbuncles (8); leg ulcers (4); decubital ulcers (3); x-ray burns (1); osteomyelitis (4); contrast-medium necrosis (1) ... total: 48. All wounds responded well to the digitalis applications. Typical was the springing up of healthy looking, bright red, easily bleeding granulations. Old torpid wounds with glazed surface and a purulent membranous covering were transformed after one or two applications of digitalis compresses into healthy red granulating wounds. Increased secretion cleansed the wound rapidly, also reducing the swelling in the vicinity of the wound and diminishing the existing pain. This was particularly evident in burn cases. After two or three days the epithelium would creep in from the border and continue to cover the defect, unless there was a depressed area which had to fill in first with granulations.

Based upon these cases of treatment of wounds with digitalis, Baron concluded that digitalis locally applied: (1) improves the blood flow locally with concomittant exudation which cleanses the wound; (2) reduces the inflammatory reaction (serous edema) and stimulates granulations; and (3) facilitates epithelial proliferation.

We were able to confirm these statements with our digitalis (digalen) applications and the ointment. In burn cases, this ointment is much more selective than tannic acid or silver nitrate in preserving cells which are not severely injured by heat. Whereas tannic acid and silver nitrate form an uniform eschar over the whole burned area, digitalis will discriminate and allow regeneration of tissue less severely damaged. This is best illustrated in second degree burns where, after a few days, multiple islands of epithelium appear from the ducts of the glands in the skin. This prevents plasty in cases which to all appearances are third degree burns. The multiple islands of new skin prove that the burn did not extend so deeply, and the glands in the skin were preserved.

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* Digalen was kindly furnished by Hoffmann-La Roche, Inc., Nutley, N. J.

Baron reports a case in which a piece of fascia 6 x 8 cm. was put into the abdominal wound for a plastic closure of a postoperative hernia. Infection set in. It looked as if the fascia would slough out. Daily irrigation of the wound with digitalis solution, application of compresses soaked with the same solution, and subsequent digitalis ointment application resulted after three weeks in an uneventful healing of the fascia in the wound and formation of a solid resistant scar.

Based upon this experience, Baron injected digitalis solution (digipuratum) in the wound at the end of any operation where primary union was questionable. The results were uniformly good.

We followed this suggestion for over a year in the following manner. At the end of the operation, a narrow rubber tube was inserted to the bottom of the wound on the trunk, neck or extremity. After twenty-four hours digitalis (digalen) solution (ampule) was injected slowly through the tube, which was gradually withdrawn. We noticed uniformly smooth healing of such a wound due to the capillary hyperemia following injection. Exact hemostasis at operation is a necessary prerequisite for good results. The presence of a hematoma would make part of the wound inaccessible to the digitalis solution. The hematoma might also cause subsequent suppuration in the wound.

In the form of compresses and later as an ointment, digitalis proved very valuable in the treatment of torpid, granulating wounds of the leg or ankle following extensive traumatic laceration with or without concomittant fracture. The fracture would heal, but a torpid granulating therapy-resistant ulcer would result. Compresses with digitalis solution filled in the wound with healthy granulations in a few days. Subsequent digitalis ointment application accelerated the covering of this bright, healthy, granulating wound with epithelium and in formation of a freely movable resistant scar not tender to pressure.

Baron mentions a case of traumatic chronic ulcer of the external malleolus of twenty years standing, following a compound fracture with subsequent osteomyelitis. The bone affection healed with a stiff ankle joint. The deep ulcer resisted all treatment, including codliver oil ointment. A 20 per cent digitalis ointment (20 ampules digipuratum) was applied and the leg immobilized in a cast for three weeks. A superficial wound, filled in with healthy granulations, was noted after three weeks. Repetition of the procedure was justified. After another three weeks, the wound was almost completely epithelized with resistant skin.

In burn cases, the use of compresses of digitalis solution followed by application of digitalis ointment scored excellent results.

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male patient who had suffer
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readily bleeding granulations filled the wound, which measured 5.4 x 1.6 cm. For six days digitalis ointment was used to bring the defect to a complete closure. The scar was supple and readily movable over the underlying tissue. The blood supply was good, a characteristic of any wound treated with digitalis.

In our own series of burns, we had a similar experience. One third degree burn of the neck and chest, which seemed to necessitate skin grafting, healed with a movable elastic scar under digalen ointment in eighteen days after removal of the eschar.

CASE REPORT

J. R., aged 58, engineer, was hit by a gush of live steam. It burned the neck, chest, both shoulders and arms. There was a third degree burn 22 x 14 cm. on the upper aspect of the chest.

First aid consisted in a spray of tincture rthiolate followed by application of tannic d merthiolate jelly (amertan).

After six days the large area on the chest was covered with a thick, dry, black eschar. Digalen ointment was applied and changed every day. After seventeen days, the crust was lifted from the wound, exposing a bright red granulating surface which bled readily. After another eighteen days of daily application of digalen ointment, the chest was covered with a supple movable skin.

After removal of the eschar, there was a uniform granulating wound. A few days later numerous bluish-white islands of epithelium became noticeable all over the defect. Under digalen ointment they increased in size rapidly, thus demonstrating the selective action of digitalis on the injured tissue.

In cases of large carbuncles, a poorly vascularized and depressed wound forms over the surrounding tissue. It usually takes a long time to fill in the defect with granulations prior to the epithelization. Here digitalis therapy gives excellent results.

Baron has reported a case of a carbuncle of the neck. At the beginning of the digitalis treatment, the wound measured 11.5 x 6 cm., ten days later 8 x 3 cm., twenty days later 6 x 1.7 cm. after thirty-four days, 2.5 x 1 cm. As healthy granulations gradually filled in the defect, the epithelium grew in from the border toward the center.

In decubital ulcers, varicose ulcers and x-ray ulcers, which are characterized by a torpid appearance, digitalis therapy caused exuberant granulations within a few days. Ulcers of years' duration with flabby granulations changed their appearance within a few days under digitalis therapy.

In varicose ulcers, the treatment of the varicosities must not be neglected.

When dealing with a fistulous tract wound, digitalis has to be used with caution. Unless the tract is laid wide open, the superficial portion of the tract might close with subsequent retention. The fistula has to heal first.

In conclusion, we find that the digitalis glucosides, when applied in form of compresses or as an ointment, exert an intensive local reaction resulting from a direct action of the digitalis on the cells of the capillary wall, the exact nature of which is not known. Probably the permeability of the vessel wall is diminished. The edema in the vicinity of the vessels recedes. Ease of capillary flow and cell metabolism in the wound is increased and facilitates regeneration after elimination of the damaged tissue. The best illustrations are old, torpid wounds which, under digitalis, are transformed within a few days into healthy granulating wounds. Almost simultaneously epithelization starts at the border of the defect. Although this restorative process is not so apparent in fresh wounds, it enables one to obtain primary healing of surgical wounds in debilitated persons.

Digitalis therapy fills a gap in the armament of the surgeon to bring to a closure wounds which resist other methods. The use of digitalis immediately after operation makes the primary healing of the incision more secure, provided the hemostasis has been complete and good approximation of the different layers has been obtained.

Dosage of digitalis in this external application is irrelevant. Doses which would be very toxic when given internally have been applied locally without any toxic reaction.

SUMARIO

Digitalis-glucosidos aplicados a las heridas en forma de compresas o de ungüento o pomada causan ardiente reacción local, debido a la acción de digitalis en las células de la pared capilar.

Aplicación diaria de compresas de digalen en ampulas y el uso del ungüento de 20 por ciento digalen producen resultados satisfactorios en casos de granulaciones indolentes en heridas de la pierna y del tobillo, y en úlceras crónicas traumáticas, decúbitas, varicosas y úlceras de rayos-x, quemaduras de segundo y tercer grado.

El mecanismo reparativo fué menos aparente en heridas frescas.

El uso de digitalis inmediatemente después de intervención quirúrgica en casos de hemostasia completa, asegura la cura de primera intención.

SOMMAIRE

Les glucosides de la digitale employés sous forme de compresses ou d'onguents provoquent une réaction intensive locale due à l'action de la digitale sur les cellules des parois capillaires.

L'application quotidienne de compresses de digalen et d'un onguent de 20 pour cent de digalen donne d'excellents résultats dans les plaies torpides de la jambe et de la cheville, dans les ulcères variqueux et dans ceux dus aux rayons-x, et aussi dans les brûlures de deuxième et du troisième degrès. Dans les plaies récentes, les résultats son moins rapides et moins apparents.

L'emploi de la digitale immédiatement après l'acte opératoire dans les cas où l'hémostase est complète assure la guérison par première intention.

Выводы

Глюкоциды наперстянки прикладываемые к ране в виде компрессов или мази вызывают острую местныю реакцию как вызывают острую местную реакцию как капилярной стенки. Ежедневное прикладивание мази содерживающей 20 процентов наперстянки дали хорошие результаты *при лечении хронических язв ноги*, хронических травматических ран, варикозных и рентгеновских язв и ожогов второй и третей степени. Хорошее влияние также было замеченно при свежих ранах. Применение наперстянки сейчас-же носле операции гарантирует при полной гемостазе заживание пер примам.

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Continuous Spinal Anesthesia in Relation to Upper Abdominal Surgery*

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EIGHT years ago the Surgical Department of the Hadassah Hospital, Jerusalem, adopted spinal anesthesia as the method of choice in all operations below the diaphragm. This form of anesthesia is almost ideal if rried out with a good technic and if oper precautions are taken.

Unfortunately, procaine, the least toxic of all the usual agents, has two very serious defects. First, its effects can never be absolutely relied upon; in a certain percentage of cases the drug refuses to act. Second, the duration of the anesthesia leaves much to be desired.

A good anesthesia with novocain can usually be guaranteed for about 45 minutes. Following this period the effect is completely unreliable. The great majority of operations can be completed within this time limit, but a gastric resection of the Polya type requires anywhere from 1¼ to 1½ hours, thus leaving a very considerable period in which a general anesthesia must be administered.

For the average surgeon this is a very distressing state of affairs, but for the Palestinian surgeon, who lacks the more costly types of anesthetic agents, this deficiency is an absolute calamity.

Some time ago percaine came to the fore, and was seized upon with alacrity in our department. Unfortunately, although faithfully following out the instructions of Howard Jones, we had two fatalities through using this drug. It must be added in extenuation that we used percaine only for high anesthesia and in the maximum dosage.

Percaine was promptly discarded; again the problem of finding an anesthetic that would combine adequate safety with continuous relaxation became very pressing.

LEMMON'S METHOD

The January, 1940, number of *Annals of Surgery* contained an article by Dr. William Lemmon on "Continuous Spinal Anesthesia." To my mind this paper opened up a completely new chapter in the long history of anesthesia, at one bold stroke solving the most difficult aspects of this intricate problem.

Here is a method which combines the nontoxity of novocain with the depth of anesthesia of percaine, also complete certainty of efficacy with adequate duration and safety.

For those who have not read Dr. Lemmon's article I would like to quote briefly the salient features of his method, using his own words:

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> The equipment needed to administer repeated injections into the spinal subarachnoid space during surgical operations consists of: (1) a rubber-covered pad or mattress; (2) spinal needles; (3) rubber tubing; (4) stopcock; (5) Luer-lok connections; (6) a 10 cc. syringe.
>
> The rubber-covered (with zipper) mattress is 5 inches thick, 18 inches broad and 6 feet long. It has a gap 7 inches in length that is beneath the lumbar spine when the patient is supine. This gap is continuous with another gap which comes to the side of the mattress. There is a break in the center of this mattress, so that the lower part that supports the lower extremities may be detached when the patient has the legs in stirrups for plastic or perineal operations. If an abdominal celiotomy follows the perineal operation, the patient is pulled back in position on the operating table, and the lower half of the rubber-covered mattress is held in place by straps with buckles. This mattress will fit any operating table. Future operating tables and pads may be made with a space for the use of continuous spinal anesthesia.
>
> The spinal puncture is made with the patient lying on one side, and the back of the patient is toward the side of the mattress with the gap in it. As soon as the cerebrospinal fluid escapes, 6 cc. are drawn into a 10 cc. Luer syringe. The syringe is disconnected, and the needle in the spine plugged with a trocar to prevent escape of spinal fluid. Six hundred mg. of procaine hydrochloride (novocain, neocaine) is now dissolved in 6 cc. of spinal fluid. The 10 cc. syringe containing 600 mg. of novocaine dissolved in 6 cc. of spinal fluid, is now connected to a Luer-lok connection with a stopcock which connects to about 3 feet of rubber tubing. The stopcock is opened and 2 cc. of the fluid containing novocain is forced into the rubber tubing. The stopcock is closed. This fluid displaces the air in the tubing. The Luer-lok connection at the opposite end of the tubing is connected to the needle in the spine. This connection is made secure. The stopcock is opened and 1 to 2 cc. of fluid introduced into the subarchnoid space from the 10 cc. syringe. The stopcock is closed and the 10 cc. syringe now has the remaining fluid left.
>
> The patient is turned on his back with the needle left in the spine, and the needle is so placed that it is in the center of the gap in the pad. It does not touch the table or the mattress at any time. The patient is then tested for analgesia and relaxation. If analgesia is not present within ten minutes, an additional dose of spinal fluid containing novocain is introduced by turning the stopcock and pressing the plunger of the 10 cc. syringe. If additional novocain is needed, it may be dissolved in sterile water, 100 mg. to each cc. and introduced as it is required. The spinal puncture is usually made in the second or the third lumbar interspace. The level of analgesia has been easily controlled by the position of the patient, dilution of the analgesic drug, and the force of injection. Procaine hydrochloride has been employed because it is the least toxic of all drugs used in producing spinal anesthesia.

In Palestine it was not possible to obtain the apparatus described, but it was possible to improvise the necessary tubing by taking the Carrel-Dakin tubing, which has a very small bore, and surrounding it with pieces of No. II catheters, thus giving the apparatus the necessary stability. The mattress was easily made.

This method was used in 24 cases, though it was slightly modified inasmuch as we gave the first 200 mg. of novocain by means of the syringe in the usual way.

The tubing was then connected with the needle, the patient was turned on his back and the Lemmon procedure was carried out.

AUTHOR'S RESULTS

Twenty-four operations for gastrectomy using the Polya technic were carried out by this method, the average dose of novocain varying between 300 and 400 mg. and the operati[illegible] lasting from 1¼ [illegible] 1½ [illegible]rs. In [illegible] was it necessary to supplement the anesthesia with a small quantity of ether.

Two operations for gastrojejunal colic fistula were also carried out by Professor Mandl by means of this anesthesia. In each case the procedure lasted approximately 3 hours, and 600 mg. of novocain were administered. In neither patient did the pulse show any acceleration.

I have carried out 31 gastrectomies under this form of anesthesia; in all except 2 cases the anesthetic left nothing to be desired. The general condition of the patients never varied during the operation and there was at no time any sign of shock.

The method has one unusual advantage over any other kind of spinal anesthesia, for the maximum dose need not be given at the beginning. This seemg paradox is illustrated by the followg example:

CASE REPORT

An old lady came into hospital complaining of incessant vomiting of several days duration; indeed, she gave the impression of being in the last stage of dissolution. It was shown that the duodenojejunal junction was completely obliterated. Operation was performed under continuous spinal anesthesia, only 150 mg. of novocain being administered. A huge tumor of the pancreas was disclosed and an anterior gastroenterostomy with enteroenterostomy was carried out. During the course of the operation the first injection of 150 mg. of novocain began to lose its effects. A further 100 mg. of the drug was inserted and the operation concluded with perfect anesthesia. Had the usual dose of 200 mg. been administered at the beginning, it is very questionable whether the patient in her weak state could have tolerated the amount.

It must be emphasized that in all these 24 operations intravenous saline therapy had been induced before the operations had begun and was continued during the subsequent procedure.

The following tabulation gives details of dosage and results:

	Operation	*Dosage*	*Results*
1.	Gastrectomy	400 mg.	
2.	Gastrectomy	300 mg.	
3.	Gastrectomy	(?)	Anesthesia insufficient
4.	Gastrectomy	400 mg.	Abducens slight headache
5.	Gastrectomy	400 mg.	Excellent
6.	Gastrectomy	300 mg.	Excellent
7.	Gastrectomy	400 mg.	Excellent
8.	Gastrectomy	400 mg.	Excellent
9.	Gastrectomy	400 mg.	Excellent
10.	Gastrectomy	400 mg.	Excellent
11.	Gastrectomy	400 mg.	Excellent
12.	Ileocolostomy	400 mg.	
13.	Gastrectomy	400 mg.	
14.	Gastrectomy	600 mg.	Good. Little ether at end.
15.	Gastrectomy	300 mg.	
16.	Gastrectomy	300 mg.	
17.	Gastrectomy	300 mg.	
18.	Gastrectomy	500 mg.	3½ hours
19.	Gastrectomy	300 mg.	
20.	Gastrocolic jejun.	600 mg.	3¼ hours
21.	Gastrocolic jejun.	600 mg.	3 hours
22.	Gastrectomy	300 mg.	1½ hours
23.	Anterior gastroenterostomy, enteroenterostomy	150 mg.	
24.	Gastrectomy, gastric ulcer	400 mg.	1¾ hours

SUMMARY

Dr. Lemmon has described a method of inducing continuous spinal anesthesia which will maintain the anesthesia for an almost indefinite time without alteration in pulse and blood pressure and without any toxic symptom. The author has used this method in 24 major operations, the majority of which were gastrectomies of the Polya type, without any untoward symptoms of any kind. In his opinion this method represents a tremendous advance in the progress of abdominal surgery and the near-

est approach to a perfect anesthesia yet produced.

SUMARIO

El Dr. Lemmon ha descrito un método para producir la anestesia espinal continua que mantendía ésta un tiempo casi indefinido sin alteración del pulso, de la presión arterial, y sin ningún síntoma tóxico. El autor ha usado este método en 24 operaciones grandes, la mayoría de las cuales fueron gastrectomías del tipo Polya, sin presentarse ningún síntoma adverso de cualquier origen. En su opinión este método representa un gran avance en el proceso de la cirugía abdominal y el aproximamiento más cercano a una anestesia perfecta.

SOMMAIRE

Le Dr. Lemmon a décrit une méthode pour enduire anesthésie spinale continue, qui *mantienne l'anesthésie* pour un temps presqu'infini sans d'altérations du poulse ou de la pression de sang et sans de symptômes toxiques. L'auteur a employée cette méthode dans 24 majeures opérations, dont la plus grande partie étaient gastrectomies du type de Polya, sans de successifs symptômes d'aucun gendre. Dans son opinion cette méthode représente un avantage énorme dans le progrès de la chirurgie abdominale et le plus près rapprochement a une perfecte anésthesie produit jusqu'ici.

Выводы

Автор описывает методу непрерывного интратекального обезболевания, которое может длиться насколько угодно без изменений в пулсе и кровном давлении и без токсических явлений. Автор употребил сей метод в 24 операциях, большинство из них гастрекомии типа Полыа, при полном отсутствии каких бы то нибыло опасных симптомов. Авто ртого мнения, что этот метод представляет собою огромный шаг в абдоминальной хирургии и ближайший‘ подход к идеальному обезболеванию.

Tuberculosis del Ciego*

(Tuberculosis of the Cecum)

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SUMMARY

This study, based on extensive clinical observations, analyzes the symptomatology, clinical findings, diagnosis, complications, prognosis and treatment of tuberculosis of the cecum. Half of the cases in this series presented pulmonary lesions, particularly of the hematogenous type. The localization in the cecum is principally that of the ulcerative hyperplastic type. The conclusions reached from this study are that while ileocolotomy occasionally leads to permanent cure, resection in one or two stages is more dependable and is followed by better clinical results.

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* Presented at the Third International Assembly of the International College of Surgeons held in Mexico City, August, 1941.

En 11 de nuestras observaciones, se han puesto en evidencia al examen radiográfico principalmente, lesiones pulmonares de distinto tipo, predominando las formas hematógenas.

Distinto criterio se ha tenido para hacer una clasificación de las diferentes formas de tuberculosis cecal. Nos ha parecido que la clasificación anátomo-clínica sigue siendo la mejor. La forma tumoral hiperplásica e hipertrófica, corresponde a lo que se ha denominado tuberculosis primitiva del ciego y se la encuentra con mayor frecuencia en la gente de edad. En cambio las formas ulceradas y entero-peritoneal, llamadas también formas secundarias, son patrimonio de personas jóvenes que tienen con frecuencia lesiones pulmonares en actividad. Este concepto de tuberculosis primitiva y secundaria no se ajusta a la alidad y una división exacta en las erentes formas antes mencionadas tampoco es posible, pues en muchas ocasiones se encuentran al par que lesiones de tipo hiperplásico, ulceraciones y localizaciones peritoneales más o menos extendidas y sólo es posible clasificar la forma, teniendo en cuenta la predominancia de una u otra de las lesiones antes anotadas. En general la forma más quirúrgica, por así decir, es la tumoral, que con frecuencia se presenta sin manifestaciones pulmonares apreciables, pero que en ocasiones se las puede encontrar graves como lo ha hecho notar Loeper. En nuestros enfermos raras veces hemos comprobado la existencia de la forma tumoral pura sin ulceraciones de la mucosa. En cuanto a la forma ulcerada las lesiones pueden estar localizadas al ciego, extendiéndose a veces al colon ascendente y transverso. Estos casos entran dentro de la categoría de las formas quirúrgicas. La forma entero peritoneal puede tener una evolución crónica o aguda. La primera representa generalmente una complicación de la tuberculosis ulcerosa y aparece como una tuberculosis úlcero-caseosa, terminando en la formación de abscesos y fístulas o evolucionando hacia la forma fibrosa (Berard y Patel). La forma aguda es más bien una afección generalizada del intestino, pero que se manifiesta con síntomas predominantes a nivel de la región ileocecal; acompaña con frecuencia brotes septicémicos laringeo-faringeos, siendo en realidad una complicación de la tuberculosis pulmonar hematógena, de la que representa su etapa final. Esta forma generalmente se observa en sujetos jóvenes y el cuadro clínico se caracteriza por diarrea profusa y dolores localizados sobre todo en la fosa ilíaca derecha, seguidos más tarde de meteorísmo, vómitos y luego ascitis (Villafañe Lastra).

El diagnóstico diferencial de la enfermedad que nos ocupa debe hacerse sobre todo, teniendo en cuenta las formas anátomo-clínicas. En la tuberculosis hiperplásica es con los tumores malignos y con los procesos inflamatorios específicos y no específicos que se plantea habitualmente el problema. Para su mejor solución los exámenes clínico, radiológico y de materias fecales se complementan. En los tumores malignos el defecto de relleno observado en el examen roentgen da una imagen muy parecida a la que se encuentra en el tuberculoma del ciego, pero siendo muy frecuente la forma vegetante del cáncer, la imagen lacunar, se presenta como expresión más o menos típica de la neoplasia. El examen de sangre arroja cifras más bajas de glóbulos rojos y hemoglobina en los tumores que en la tuberculosis, esto lo hemos verificado en nuestros pacientes y es un hecho sobre el cual ya han insistido numerosos autores. En la tuberculosis de forma hiperplásica, que con frecuencia tiene ulceraciones, se encuentran a veces bacilos ácido-resistentes en las materias fecales, lo que como ya hemos dicho tiene importancia para el diagnóstico, cuando no hay lesión pulmonar en actividad. Debo recordar que se citan casos (Feissly) de bacilos de Koch en las deposiciones, en sujetos portadores de cáncer del colon. El diagnóstico diferencial puede ser aún difícil, desde el punto de vista anátomo-patológico macroscópico y hemos tenido algunos enfermos en que la duda ha persistido, aún con la pieza anatómica en la mano. En la literatura hay casos relatados, de lesiones tuberculosas y cancerosas más o menos próximas.

En los plastrones apendiculares residuales, sobre todo en las apendicitis retrocecales subagudas con intensa reacción inflamatoria del tejido celular ilíaco se puede plantear el diagnóstico diferencial con la tuberculosis cecal. En estos casos en la inflamación participa generalmente el epiplón, el mesenterio y las paredes intestinales. En el examen radiológico suele presentarse una alteración de la imagen del ciego dando un defecto de llenamiento. Hemos tenido oportunidad de observar algunos casos diagnóstico dudoso y uno de los últimos, fué un enfermo en que la duda del diagnóstico, llevó al cirujano a practicar la resección del ciego y colon ascendente; el examen anátomo patológico microscópico, reveló que se trataba de un proceso inflamatorio no específico.

En los antecedentes de estos enfermos con plastrones apendiculares residuales, el buen interrogatorio descubre casi siempre el antecedente del ataque agudo.

En la actinomicosis el plastrón invade rápidamente las partes blandas y da lugar a la formación de abscesos y fístulas.

En la amebiasis el examen de las materias fecales descubre casi siempre la presencia de la ameba histolítica o sus huevos.

Resumiendo nuestra experiencia podemos afirmar que la radiología aplicada al estudio de los tumores del ciego no da imágenes absolutamente típicas.

En las formas ulceradas, como el defecto es cambiable, se pueden apreciar perfectamente las modificaciones de la imagen del ciego en las radiografías tomadas después de ingestión y después de la enema opaca, pero es indispensable poseer otros elementos de juicio, pues el defecto de llenamiento, obedece al hiperperistaltismo condicionado por las úlceras. Debemos tener siempre en cuenta, que en la tuberculosis generalmente las lesiones no se localizan solamente en el ciego, sino también en el íleon. En la forma enteroperitoneal crónica y bien localizada, el diagóstico diferencial debe hacerse con los procesos crónicos dolorosos de la fosa ilíaca derecha, sobre todo con la apendicitis crónica. El estudio prolijo del enfermo, la existencia de lesiones pulmonares en actividad, la febrícola, las perturbaciones del pulso, son otros tantos síntomas que junto con el examen radiológico minucioso pueden llevar al diagnóstico.

De las complicaciones que hemos observado debemos recordar la oclusión intestinal, que generalmente se presenta en forma incompleta en las tuberculosis hiperplásicas, manifestándose por meteorismo pasajero y cólicos intestinales más o menos intensos.

La tuberculosis ulcerosa raras veces da lugar a estrecheces a nivel del ciego y del colon. Berard y Patel afirman que la cicatrización de las ulceraciones cecales es posible, pero la esclerosis es menos completa que sobre el intestino delgado y no termina casi nunca dando estenosis cicatricial. Oppel ha llamado la atención, sobre la rareza de las estenosis múltiples en el intestino grueso.

En nuestra [illegible] ctica [illegible] casos de perf [illegible] un enfermo que hizo un absceso en la región lumbar, el que fué abierto dando lugar a la formación de una fístula estercorácea; el otro no corresponde en realidad a una tuberculosis del ciego, sino que fué una perforación de una úlcera del intestino delgado al peritoneo y el último se trataba de una perforación a vejiga.

Hasta hace poco tiempo se consideraba favorable el pronóstico en las formas quirúrgicas de la tuberculosis del ciego, que correspondián al tuberculoma o tuberculosis hipertrófica o hiperplásica, como también se han designado. En cambio era de pésimo pronóstico la tuberculosis ulcerosa del ciego, sobre todo en las formas no bien localizadas en enfermos portadores de lesiones pulmonares en actividad. Calixto J. Núñez gastroenterólogo del Instituto de Tisiología de Córdoba, haciendo un estudio tadístico ha llegado a la conclusión, e si bien el porcentaje de mortalidad es alto en los enfermos portadores de tuberculosis intestinal secundaria (55.43 por ciento), la muerte se debe en la gran mayoría de los casos (49.53 por ciento), a la lesión pulmonar y sólo el 5.51 por ciento muere a consecuencia de la evolutividad o de las complicaciones de la localización intestinal. El mismo autor destaca un hecho ya comprobado por otros, de que las ulceraciones tuberculosas del intestino tienen gran tendencia a la curación y hace referencia a los resultados de sus investigaciones autópsicas que confirman plenamente la aptitud de cicatrizar que tienen las úlceras tuberculosas intestinales. El concepto, pues, sobre el pronóstico de la tuberculosis secundaria del ciego, ha cambiado y hoy en día se puede hablar de curación médica o quirúrgica de esta penosa enfermedad. Teniendo en cuenta lo que antecede, autores como Smithies, sostienen que la precocidad del diagnóstico, que permite hacer rápidamente un tratamiento adecuado, constituye un importante factor de buen pronóstico.

En lo que se refiere al tratamiento de la tuberculosis del ciego, nuestra experiencia se relaciona únicamente a la terapéutica quirúrgica. En Córdoba, el Professor Villafañe Lastra y el Dr. Calixto J. Núñez han tratado con éxito tuberculosis del ciego de forma ulcerosa, con régimen dietético, administración adecuada de vitaminas, helioterapia y rayos ultravioletas.

La idea de tratar quirúrgicamente la tuberculosis del ciego, se remonta al año 1882, en que Gussembauer, hace notar la posibilidad de resecar las lesiones en la forma hiperplásica de la tuberculosis cecal y Conrad, en 1898, en la Clínica Gussembauer, publica 81 casos operados. Czerny, en 1886, practica la primera resección. En los últimos tiempos es sobre todo Archibald, quien ha llamado más la atención sobre el gran valor de la cirugía, cuando la lesión tuberculosa está localizada.

La mayor indicación del tratamiento quirúrgico en la tuberculosis cecal, corresponde a la forma hiperplásica, generalmente llamada tuberculosis quirúrgica del ciego, en oposición a la tuberculosis ulcerosa y a la forma enteroperitoneal, que se *dicen* tuberculosis médicas. Sin *embargo* en las formas ulcerosas cuando las lesiones son localizadas y por consiguiente *diagnosticadas* precozmente y se presentan en *enfermos* con procesos pulmonares *apagados* o *en* actividad, para los que se necesita disponer de buenas condiciones del aparato digestivo, a fin de hacer una alimentación adecuada, las indicaciones quirúrgicas se plantean muchas veces y las operaciones suelen dar resultados favorables y a veces inesperados, como ha ocurrido en algunas de nuestras observaciones. Núñez que trata médicamente con buen éxito, las tuberculosis ulcerosas localizadas del ciego, aconseja la cirugía en todos los casos de lesiones úlcero-hiperplásica o *úlcero-estenosante*, con sufrimientos continuados para el enfermo.

El tratamiento quirúrgico ideal, lo constituye la resección seccionando el íleon y el colon a distancia del sitio ocupado por las lesiones y practicando la anastómosis ileo-cólica. Esta operación puede hacerse en uno o dos tiempos, según el estado general del enfermo y según también las condiciones locales que se encuentren, durante el acto operatorio. Nuestro criterio actual es de que siempre que se pueda, la resección en un tiempo tiene grandes ventajas, pues en las operaciones fragmentadas ocurre muy frecuentemente, que los enfermos mejorados después del primer tiempo, se resisten al segundo, surgiendo después inconvenientes debidos principalmente al reflujo del contenido intestinal en el asa excluída.

Al efectuar la ileocolostomía, seccionamos siempre el íleon. Para evitar los inconvenientes de éstasis antes mencionados, algunos cirujanos, después de seccionar el íleon y el colon, abocan los cabos a la piel, teniendo también así la posibilidad de tratar localmente la lesión intestinal. Recién en un segundo tiempo, efectuán la extirpación del asa excluída. No tenemos ninguna experiencia con este tipo de operación.

Con la ileocolostomía sólamente, se han observado algunos resultados duraderos; nosotros hemos conseguido mejorías notables en enfermos con tuberculosis pulmonares en evolución que no podían alimentarse. Sin embargo se cuentan bastantes malos resultados y un gran número de enfermos no mejoran y algunos síntomas como la diarrea, a veces más bien se agravan.

La ileostomía es una operación sobre la cual no tenemos experiencia, pero que parece dar buenos resultados como recurso paliativo en los casos de obstrucción o de síntomas irritativos muy extendidos que exponen al fracaso, si se practica una ileocolostomía, por el peligro de la falla de las suturas. Es lo que nos ocurrió en un enfermo del distinguido tisiólogo argentino Dr. Antonio Cetrángolo, operado en el Sanatorio de Ascochinga.

Hemos antedido 21 enfermos con lesiones tuberculosas localizadas en la región ileocecal: 2 casos no se intervinieron; en 2 se efectuó una laparotomía exploradora; en 8 ileocolostomía; en 5 recessión en dos tiempos y en 4 la extirpación en un tiempo.

SUMARIO

El estudio de las observaciones clínicas que motivan esta comunicación, nos ha permitido analizar la sintomatología, formas clínicas, diagnóstico, complicaciones, pronóstico y tratamiento de la tuberculosis del ciego. La mitad de los casos han presentado lesiones pulmonares, principalmente del tipo hematógeno y la localización en el ciego ha correspondido con mayor frecuencia a la forma úlcero-hiperplásica. El examen de los enfermos operados nos ha llevado a la conclusión de que si bien, la ileocolostomía logra a veces curaciones estables, la resección en uno o dos tiempos ofrece mayores garantías y proporciona por consiguiente, los mejores resultados terapéuticos.

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Clairmont-W[illegible] [illegible]rgie

RÉSUMÉ

L'étude des observations cliniques fournies par Allende, nous permet d'analyser la symptomatologie, les signes cliniques, le diagnostic, les complications, le pronostic et le traitement de la tuberculose du coecum. La moitié des cas de l'auteur avait des lésions pulmonaires, particulièrement d'origine hematogène, et les localisations au coecum étaient de nature hyperplastique ulcérative. La revue des cas nous porte à la conclusion que même si l'iléocolostomie donne parfois des guérisons permanentes, la résection donne de meilleures garanties et nous obtient de meilleurs résultats.

Выводы

Автор описывает на обширном материале, анализирует симптоматологию, диагноз, осложения, прогноз и лечение туберкулеза слепой кишки.

В половине случаев был легочный туберкулез гемамогенного происхождения. Илеоколотомея иногда дает удачный результат; лучшие результаты приобретаются резекцией в одной или двых ступенях.

A New Method for the Diagnosis of Venous Valvular Insufficiency of the Lower Extremities

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THE original purpose for which the oscillometer was constructed was the determination of systolic and diastolic pressure by a non-auscultatory method.

In 1902 Erlanger constructed the first apparatus to measure the amplitude of the pulse in the peripheral arteries, and in 1909 Pachon invented the oscillometer, which, with some minor changes, is known today as the Boulite oscillometer; Vaquez invented another apparatus more suitable for the study of the peripheral pulse, the so-called "quimometer." Helige Sammuels made a more perfect apparatus, which he called "pulsometer."*

In 1912 Cawadias observed that the oscillometer was very useful in the study of the peripheral pulse in persons with certain arterial diseases. The different grades of obstruction were demonstrated by the proportional variations in the oscillation of the needle, and they could be measured with much precision.

The object of this apparatus is to register the expansion and retraction of the peripheral arteries occurring during arterial diastole and systole; therefore, in addition to registering these variations and showing the pathologic diminution or abolition of the circulatory activity, it measures arterial elasticity. Its chief value is in measurement of the elasticity and registering the diminution of the arterial circulation when other methods of exploration are not capable of demonstrating it; and in cases of arterial obstruction it indicates approximately the place affected.

By applying this method in the exploration of the vascular condition of the lower extremities with evident circulatory deficiency in cases of clinically demonstrated varicose veins, ulcers and *other regional* disturbances resulting from deficient circulation, I was able to observe a large oscillation, which gave erroneous indications in *contradiction* with clinical findings.

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*The Hellings Samuels Pulsometer is made by Hellings, Inc., Long Island, New York.

The problem, therefore, is: How to *explain the presence of* a large oscillometric index when the blood supply is obviously in poor condition, knowing that oscillometry is a method that *marks* or indicates the difference between the enlargement and retraction of the arterial sphere, which is the equivalent of speaking of arterial elasticity? How is *it that* in cases of deficient arterial circulation and lack of elasticity, the needle of the oscillometer shows great oscillation in some cases? To find the solution to this problem, we must look for another important factor apart from the arterial, *and the thought* arises that in the case of varicosities this venous territory can show abnormal oscillations.

Owing to the presence of a valvular system in the femoral veins, that normally serves the purpose of preventing the reflux of the venous blood, we might suppose that in cases of venous incompetence, the refluent blood itself might produce the oscillometric variations. This hypothesis was upheld by the following facts:

1. The oscillation is greater when the person is standing, less in the dorsal *recumbent position with the corresponding* extremity flexed at a right angle, the foot being in a vertical position. The force of gravity plays an important rôle in these cases, though cognizance of the functional conditions of the venous valvular system must be taken.

2. The oscillations decrease or disappear when a loose ligature is applied to the upper part of the lower limb, and they reappear and recover the initial amplitude on *removal of the ligature.*

3. The oscillation is not synchronous with arterial diastole, but is somewhat retarded; we might say *that it occurs* during pre-systole or during arterial systole.

These tests, which seem to us sufficiently conclusive to substantiate the hypothesis, have certain advantages or utility *in their practical application,* namely: (a) They offer a new method for exploration of the valvular sufficiency or insufficiency of the femoral veins, which is superior to all other methods in current usage. (b) In many cases we use this oscillometric exploration for arterial circulation. It has been erroneously believed *that* when *the* oscillometric index is in disagreement with the clinical data, insufficiency is indicated, or that a large oscillometric index is a sign of efficient arterial circulation.

Certain Mexican clinicians have made a priori the following objection: It is not possible for the oscillometer to register the insignificant variations of *the* peripheral venous pressure, and what is more, not even with manometers that introduce a needle into the vein can these oscillations be shown. In our opinion this objection is true from the physiologic, but not the physiopathologic point of view. This may mean, physiopathologically speaking, that in *normal* people, owing to the enormous multiplication or enlargement of the venous system, the pressure of each vein is not registered on the manometer; on the other hand it registers on the oscillometer, because *this instrument* measures the total of the combined venous pressures, which is logically *affected in* valvular insufficiency.

In any event, the method should be finally evaluated by repeating the experiment in selective cases.

CONCLUSIONS

1. An efficient n is red f

establishing the sufficiency or insufficiency of the femoral venous valves by the oscillometric method.

2. By resorting to this method, it is possible to diagnose the condition of the deep varicose veins, when there is valvular insufficiency.

3. A large oscillometric index is not always seen in the lower extremities in cases of satisfactory arterial elasticity. This is due to the oscillations of the veins and of the surrounding tissues by the returning blood column in cases of valvular insufficiency.

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SUMARIO

Se presenta un método eficiente para determinar el estado funcional del sistema valvular femoral por el método oscilométrico.

Por medio de este método es posible diagnosticar la condición de las venas varicosas profundas con insuficiencia valvular.

Un indice oscilométrico grande no se presenta siempre en las extremidades inferiores en los casos que tienen una elasticidad arterial satisfactoria. Esto se debe a las oscilaciones de las venas y de los tejidos por la columna de sangre de retorno en casos de insuficiencia valvular.

SOMMAIRE

L'auteur nous offre une méthode pour établir la suffisance ou l'insuffisance des valvules de la veine fémorale au moyen de la méthode oscillométrique.

Cette méthode nous renseigne sur l'état des veines variqueuses profondes quand il y a une insuffisance valvulaire. Un haut index oscillométrique n'est pas toujours présent dans les extrémités inférieures dans les cas où l'élasticité artérielle est satisfaisante. Cela est dû aux oscillations des veines et des tissus environnants, déterminées par la colonne sanguine allant au coeur, dans les cas d'insuffisance valvulaire.

Выводы

Автор описывает метод распознавания адекватности заслонок феморальных вен посредством осциллометрии. Эта метода делает возможным конституровать глубокия варикозныя вены в присутствии заслонковой недостаточности.

Большой осциллометрический показатель может отсуствовать в случаях с удовлетворительной артериальной эластичностью. Это об'ясняется тем, что возвращающийся кровянный столб при заслонковой недостаточности производит колебание вен и окружающей ткани.

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An Unusual Case of Retroperitoneal Tumor, with a Review of the Literature

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RETROPERITONEAL tumors are relatively rare, frequently overlooked, and are, either actually or potentially, highly malignant. Rubin[1] stated that among 5600 cases treated in the Gynecological Service of Mount Sinai Hospital, New York, in a period of eight years, only four could be classified as retroperitoneal tumors. Hansmann and Budd[2] stated that from 1894 to 1931, instances of unattached retroperitoneal tumors reported in the literature, averaged less than one case per year. Mayo and Dixon,[3] in 1927, stated that about 200 cases of retroperitoneal tumor had been reported. They said that von Wahlendorf[4] reviewed 165 of these up to 1921 and Lecène[5] in 1919 reported 119. These reported cases no doubt overlap. Mayo and Dixon mentioned 16 additional cases recorded in 1921. Slagerman,[6] in a review of the literature, found a total of 144 cases of retroperitoneal sarcoma reviewed up to August, 1937, and Pemberten and Whitlock[7] of the Mayo Clinic [illegible] been [illegible] ipoma in the literature. However, there are numerous other types of retroperitoneal tumors encountered, the more common being teratomas, lymphoid tumors of the Hodgkin type, and pseudomucinous and cyst adenomas. I feel justified in stating that well over 400 cases of retroperitoneal tumor have been reported thus far.

The first description of retroperitoneal tumor, according to Pemberton and Whitlock,[7] was given by Morgagni in 1761. Slagerman[6] stated that the term retroperitoneal tumor was first applied by Lobstein in 1829, but included tumors originating behind the peritoneum, foreign to the retroperitoneal organs, and those metastasizing from other organs. Hansmann and Budd[2] stated that, until 1880, these tumors were diagnosed as sarcomas or pancreatic cysts and dismissed without further consideration or study. They stated further that Howship[8] in 1871 observed a composite tumor possessing certain characteristics similar to dermoid teratomas commonly found in the ovary. In 1889, Bassini[9] described a cystic adenoma morphologically resembling a pseudomucinous cystadenoma of the ovary, and Frank[10] in 1894 observed a similar tumor and attributed its histogenesis to an accessory ovary. Cohn[11] wrote that retroperitoneal tumors were discussed before the Southern Surgical Association in 1897 by Dr. Richard Douglas, who called attention to the fact that in 1889 Rogowski had collected 20 cases of solid retroperitoneal tumors, each of them a sarcoma. Van de Veer, in 1892, discussed the subject of retroperitoneal tumors before th American Surgical Association. Sinc publication of the reports from thes pioneers, a voluminous bibliography ha arisen dealing with retroperitoneal tumors.

Slagerman,[6] in discussing the sarcomatous type, stated that the greatest number of cases occur in the fourth to the sixth decade, although cases have been reported between 1 and 78, and that the incidence is greater in males. Judd and Larson,[12] in a study of 46 cases of retroperitoneal sarcoma, likewise found that the commonest age group is the fourth, fifth and sixth decade, and that males predominate over females in a ratio of two to one. On the other hand, Mayo and Dixon,[3] in a study of retroperitoneal lipoma, found the same age grouping, but females predominating over males in a ratio of 72 to 28, while emberton and Whitlock,[7] including ayo and Dixon's figures with those of ers, found that slightly more than f were females and that the commonst age was the fifth and sixth decade.

EMBRYOLOGY

Hansmann and Budd,[2] after a study of seventeen unattached retroperitoneal tumors correlated with available information from the literature, concluded that these tumors arise from remnants of the embryonal urogenital apparatus and usually from the mesonephros. Krogius[14] believed that retroperitoneal lipomas are mesenchymal in origin and contain varying amounts of connective tissue.

Goebel,[15] in 1901, concluded that his case of dermoid teratoma had its origin in a bigerminal inclusion. This interpretation has not been further clarified. Subsequent to Frank's[16] having noted the similarity between retroperitoneal cystadenoma and cystadenoma of the ovary, glomeruli and renal tubules have at times been found in the walls of these cysts.

Rubin[1] stated that retroperitoneal tumors, especially of the solid variety, arise as a rule from one of three organs, the pancreas, kidneys or suprarenals. In the female pelvis such tumors may originate from the Wolffian and Gärtner's ducts or from the components of the ovary. Hansmann and Budd mention that retroperitoneal tumors having the appearance of adenosarcoma of the endometrium or even similarity in structure to a cervical carcinoma, probably originate from the Müllerian apparatus. Pemberton and Whitlock[7] found in a series of 30 cases of retroperitoneal lipoma, that one half of these tumors seemed to originate in the kidney or the perirenal tissues.

PATHOLOGY

The following types of retroperitoneal tumors are most commonly found: lipomas and mixed lipomas, fibromas and fibroids, sarcomas, lymphoid tumors, teratomas and teratoids, adenomas and cystadenomas, gangliomas and cordomas.

Most of these tumors are either actually or potentially malignant. Even a harmless lipoma, when in this location, may give rise to sarcomatous or myxomatous degeneration with rapid malignancy.

Pemberton and Whitlock described 30 cases of lipoma which came to the Mayo Clinic. Six patients died; 6 had recurrence and 3 others possible recurrence, giving a satisfactory result in but half of the series. Ten of the 30 patients had sarcomatous change in the original lipoma. In 3 of the 6 having recurrence, pure lipomas had been removed, whereas in the remaining 3, the tumors had shown sarcomatous change. Five operations were performed for recurrent growths, 3 patients having been operated on first at the Clinic. The pathologic report stated that these 3 recurrent tumors showed various types of myxomatous or sarcomatous changes.

Mayo and Dixon[3] stated earlier that the ultimate prognosis of lipomas in this location is grave. In von Wahlendorf's series, the operative mortality was 25 per cent, and in Masson and Horgan's[16] series, 16 per cent. The latter stated: "Recurrence is not uncommon and often with recurrence there is sarcomatous change . . . Retroperitoneal lipoma before removal often grossly resembles sarcoma. A specimen should always be examined microscopically and if no malignant change is found, the tumor is usually removed."

Miller[17] stated that numerous reviews of retroperitoneal lipomas emphasize not only the tendency to sarcomatous degeneration, but also the greater danger of injury to the blood vessels and bowels due to the size of the tumors. Mechanical difficulties may be unsurmountable for the most skillful surgeon. He described a case with multiple lipomas weighing in all 11,800 Gm., 6000 Gm. of which were removed at operation. The patient developed a fecal fistula and died.

Deupert[18] described a huge lipoma with sarcomatous degeneration emerging through the obturator foramen within the pelvis. He removed the intrapelvic portion by morcellation through the obturator foramen under guidance of laparotomy. The patient survived the immediate operation but in a short time developed a recurrence.

Brady[19] described a fibromyoma of the urachus and Lindeman,[20] a 49-pound retroperitoneal cystic fibroid. Miller[17] reported a retroperitoneal fibromyoma which required four operations for recurring retroperitoneal fibromyomas following an original hysterectomy for fibroid. Hansmann and Budd[2] stated: "Leiomyomas occur retroperitoneally unattached, as well as within the kidney. They are somewhat more malignant than leiomyomas of the adult uterus, but are otherwise similar".

Judd and Larson[12] stated that retroperitoneal tumors may be benign or malignant and in the latter, lymphosarcomas and fibrosarcomas predominate. However, other types are encountered such as spindle-cell sarcoma, mixed cell sarcoma or fibromyxosarcoma, small, or medium and giant-cell sarcoma. Flashman and Leopold [21] described a case they regarded as intermediate between lymphosarcoma and the fatal lymphatic leukemia, that developed in spite of irradiation. Leichner[22] described a case of retroperitoneal fibromyxosarcoma with an eosinophilia of 10 per cent. Kilbane and Lester[23] reported a Wilm's (renal) retroperitoneal tumor in an adult. They agreed with Fraser that in the early stages this tumor is really a carcinoma, and with age metaplasia takes place, giving rise to sarcomatous characteristics.

Judd and Larson[12] presented two cases of retroperitoneal fibrosarcoma and reviewed 46 cases of retroperitoneal sarcoma in which the diagnosis was proved by exploratory operation and biopsy followed by microscopic study. As complete removal as possible was accomplished in 15 cases. Six of the 46 cases showed demonstrable metastases. Pathologic examination showed an ordinary sarcoma in 20 cases and various mixed types in 15. The growths have a strong tendency to recur locally in spite of wide excision and complete removal. As a rule, metastasis is late.

Cohn[11] described a retroperitoneal sarcoma secondary to a sarcoma of the thigh, as well as a case of primary retroperitoneal sarcoma without metastases. Pow[24] quoted a case of retroperitoneal sarcoma with lung metastases resulting in death. Newton[25] described a case of retroperitoneal sarcoma in a girl of 17, that apparently disappeared after [illegible] x-ray the[illegible]

Walters, Levine, Myers and Knott[26] reported a patient with two round-cell sarcomas with local transitions to the mixed-cell type, located in the abdominal aortal region, extensive in all directions, but most strikingly along the line of the renal vessels. The patient died before operation could be performed and the findings were made at autopsy. Slagerman[6] described a cystic, hemorrhagic spindle-cell sarcoma removed at operation. He stated that metastases occur in 33 per cent of such cases, most frequently to the liver and lungs.

Miller[18] described a case of retroperitoneal sarcoma of mesoblastic origin projecting into the right pelvis as high as the right iliac fossa and displacing the uterus. It was considered inoperable and the patient died. He also describes another patient who previously had a panhysterectomy for adenocarcinoma of the terus and later developed a soft retro-ritoneal mass behind and to the left f the sigmoid and rectum. This proved to be a spindle-celled sarcoma of mesoblastic origin. The patient died.

Lymphoid tumors consist mainly of lymphoblastoma (Hodgkin's type) and lymphosarcoma, apparently originating in the retroperitoneal glands. Cohn[11] described a case not correctly diagnosed at laparotomy but found at autopsy to be retroperitoneal lymphoblastoma of the Hodgkin type. Burman stated in 1928 that while it is true that lymphosarcoma is a neoplastic disease, Hodgkin's disease is probably an infection.

Teratomas and teratoids are highly malignant embryonal tumors. Mecray and Frazier[13] stated that the literature is most unsatisfactory and that recently three pathologists were questioned as to the elements necessarily present in a tumor to be classified as a teratoma. Each presented different criteria. Mecray and Frazier gave a tabulation of the 35 cases of teratoma and teratoid reported up to 1936, with fourteen deaths, and described their own case which contains elements representative of all the primary embryonal layers, but since it contains no formed organs, it was classified as a teratoid. Their patient recovered.

Cohn[11] described a case of teratoma of the testicle with retroperitoneal metastases. The patient was found to be alive and well five years later, although Tanner is cited as having stated that 80 per cent of patients with teratoma of the testicle die within four years.

Dermoid cysts are closely related to teratomas. Hansmann and Budd[2] stated that the thickness of the wall of these cysts, coupled with large amounts of brownish grumous content, viewed at the time of operation should lead one to suspect a preformed cyst in contradistinction to a chronic abscess. Hair in the cyst proves the diagnosis.

The same authors further stated that dermoid teratomas are similar except that they contain multiple cysts with many well-defined hair follicles. The contents of the cysts, in addition to being grumose, are greasy. Hair is usually abundant and coarse. Bone in the tumor, as shown in the x-ray, is very significant. When these teratomas become infected, granulation tissue covers the walls of the various cysts, and the cavities are filled with hair and puriform material. These writers claim that the natural history is similar to that of dermoid cyst of the ovary, and described one of their cases of 36 years' duration.

Brady[19] reported a case of benign urachal fibroid cyst, and stated that up to 1927 when he operated on his case, only 20 such cases had been reported, of which 18 were malignant. He also reported a case of retroperitoneal cyst in a girl of 4. Other adenomatous growths sometimes encountered retroperitoneally are the so-called psammonas of the ovary and the so-called serous and pseudomucinous cystadenomas of the ovary. (Hansmann and Budd[2]).

Judd and Larson[12] believed paraganglioneuroma is an infrequent tumor, classifying it as a sarcoma. Other writers consider it a distinct tumor. McFarland[26] reported a case of retroperitoneal ganglioneuroma in addition to a long list of similar cases described in the literature. Miller[17] described a case of retroperitoneal neurolipoma and two other cases of nerve tumors in this site, one a neurofibroma and one a schwannoma. Frank[27] reported a retroperitoneal cystic schwannoma in a patient with von Recklinghausen's disease.

SYMPTOMS

The symptoms of retroperitoneal tumor, when symptoms exist, are those of pressure. If the tumor is confined to one side, there may be marked pressure symptoms in either the colon, the kidneys and ureters or both. Small tumors are frequently not suspected until exploration. Many retroperitoneal tumors attain the size of a full-term pregnancy.

Slagerman[6] stated that the symptoms of retroperitoneal sarcomas are indefinite because of their slow growth and may be unnoticed until they produce pressure symptoms or involve vital organs. Interference with bladder function and pressure on nerves and blood-vessels, causing pain and edema in the legs are important symptoms. He said, further, that constant signs of retroperitoneal sarcomata include low grade fever, loss of weight, secondary anemia and the presence of the colon in a groove on the anterior surface of the tumor. Because of difficulty in differentiating abdominal tumors on examination, retroperitoneal sarcomas may remain undiagnosed until surgical intervention. The course of the disease depends upon the tumor's location and its rate of growth, lasting from one month to years. These symptoms with the exception of fever and anemia are applicable to practically all types of retroperitoneal tumors.

DIAGNOSIS

Unless metastases have taken place, there is only an abdominal tumor with associated discomfort. These tumors may become massive. Cystoscopy with pyelograms followed by stereoscopic plates have been found to be of value in those cases where the tumors are located near the kidneys or ureters. A normal pelvis and a normal kidney contour with a massive retroperitoneal tumor, makes the diagnosis of a urogenital tumor likely. A stereoscopic study indicates the relative positions of the kidney and the mass. If the tumor is movable, the question of whether it moves independently of the kidney may be of value. The injected kidney pelvis may be considered a fixed point and the tumor may be moved by palpation. X-ray studies of the gastro-intestinal tract will frequently show distortion from the expansive growth of the tumor.

TREATMENT

In early operable cases without metastases the tumor should be removed, submitted to a pathologist and followed by x-ray treatments, if indicated. Inoperable cases should be treated by x-ray or radium if malignant or potentially malignant. Benign operable cases, like the one which I shall describe, had formerly no recognized method of treatment. I suggest the Elliott treatment for such cases.

My case does not fall into any of the usual categories, but seems atypical. It was und [illegible] flammato [illegible] of its [illegible] pletely under a course of Elliott treatments. A larger series of cases would be necessary before advocating this method as a standard procedure. However, it is certainly worthy of a trial in cases similar to mine.

REPORT OF A CASE

A 30-year old white woman, married and childless, was admitted in September, 1936, with a history of amenorrhea in June and July of that year, low abdominal pains and vaginal bleeding on August 15, 1936, followed by cessation of bleeding but continuation of pain. Laparotomy was performed in London on August 21, 1936, and a mass found in the right adnexal region, adherent to the lateral pelvic wall. There was no recurrence of bleeding.

She returned to New York City on September 14 and four days later intermittent pains in the right lower quadrant returned, radiating to the flank. She was treated for one week in a private hospital, with douches and rest, with no notable changes observed. Following discharge from the hospital, the patient had a normal period lasting five days. Five days later the lower abdominal pains returned and she was admitted to the hospital for joint disease. There was no fever, chills nor vomiting. No previous menstrual abnormalities were reported except slight vaginal discharge since June, 1936. A tentative diagnosis of trichomonas vaginalis was not confirmed by laboratory tests.

Physical examination showed a well-developed, well-nourished woman who appeared neither acutely nor chronically ill. A right paramedian well-healed scar was seen and slight tenderness and voluntary spasm over the lower quadrant. The physical examination was otherwise negative except slightly enlarged and congested tonsils, congested pharynx and low blood-pressure (88-60). There was no abdominal rigidity; liver, spleen and kidneys were not palpable. There were no masses palpable abdominally.

Bimanual examination under general anesthesia, October 12, revealed a normal introitus, and a normal cervix lying in an axis horizontal to the axis of the vagina. The uterus was firm, moderately enlarged, immovable,—this immobility probably being due to adhesions between the uterus and the parietal peritoneum of the anterior abdominal wall. The left tube and ovary were felt to be normal in size and consistency. In the right adnexal area, a mass the size of a large orange was felt in close approximation to the lateral wall of the fundus. At no point was there a sharp line of demarcation between the wall of the uterus and this mass, except at the lower pole and alongside the cervix. This mass was soft in consistency, spherical in shape and fairly movable with some fluctuation present. Rectal and vaginal examination revealed no mass in the cul-de-sac or within the rectum itself. In view of the complicating factors of this case, a definite and positive diagnosis was difficult to make, but the following provisional diagnoses were made: (1) right tubo-ovarian disease; (2) intraligamentous cyst; (3) possible benign neoplasm of undetermined origin.

Treatment suggested.—In view of the fact that this patient was operated on two months earlier for the same complaint, without appreciable benefit, Elliott treatments were administered twice daily.

In consultation, October 15, Dr. Rongy found an irregular mass in the right cul-de-sac, closely adherent to the uterus, about the size of a small orange. It was apparently situated extraperitoneally and most likely was the result of parametrial infection, which the patient suffered in June. The uterus was somewhat fixed on the right side, although on the whole it was fairly movable. The nature and location of the mass such that surgical intervention would be highly inadvisable.

Dr. Rongy advised a continuation of the Elliott treatment and not surgical intervention, because he believed that the mass was extraperitoneal and due to parametritis.

From October 14 to 22, Elliott treatment was given, usually two hourly treatments being administered daily. The pain gradually subsided and the mass diminished in size. The patient was discharged from the hospital on October 22 with a *diagnosis of* (1) extraperitoneal tumor and parametrial infection; (2) possible intraligamentous cyst. (The second was later found not to be present).

Laboratory reports: (October 12, 1936) Urine: Sp.Gr. 1,026; acid, albumin, faint trace; sugar negative. Few W.B.C.; cervical smear no gonococci or trichomonads; Wassermann, Kahn and G. C., fixation, negative.

On October 13, 1936, x-ray examination of the lumbar region and pelvis revealed no evidence of osseous or joint pathology and no evidence of any abnormal masses or calcifications. Blood count: R.B.C., 4,480,000; Hb. 75 per cent; W.B.C., 8000 with 45 segmented and 2 non-segmented neutrophiles, 1 eosinophile, 49 lymphocytes and 3 monocytes. Sedimentation rate, 36 mm. Blood chemistry: urea N.132; creatinine 1.0; sugar 95; uric acid, 4.0.

October 14, 1936, Friedman test negative.

After discharge from the hospital, the patient reported to my office three times weekly for Elliott treatments. After three months, the mass had entirely disappeared and the patient was discharged.

On March 17, 1938, the patient was delivered of a normal, living child at the Polyclinic Hospital. Position, R.O.P. The delivery was normal with uneventful recovery. No evidence of tumor was felt at the time of delivery or on the day of discharge from the hospital.

SUMMARY

1. A case of inoperable retroperitoneal tumor probably inflammatory in nature, has been described. Treatment for three months after discharge from the hospital was followed by disappearance of the tumor.

2. Disappearance of such a tumor under a course of Elliott treatment is the first described in the literature.

3. A general description of various types of retroperitoneal tumors with a review of the literature is given.

4. While it is advised that operable retroperitoneal tumors be removed, followed by irradiation if indicated and inoperable malignant retroperitoneal tumors be treated by irradiation, a new method of treatment for benign retroperitoneal tumors, inoperable on account of their location, is suggested. For a tumor of this type, a course of Elliott treatments appears logical and certainly deserves a trial. In my case, it effected an apparent cure, but a series of cases would be indicated before making this a standard procedure.

RÉSUMÉ

Un cas de tumeur rétro-péritonéale benigne inopérable est décrit par l'auteur. Le malade fut traité dans différents hôpitaux et à domicile. Les traitements auxquels il fut soumis sont décrits. Le traitement Elliott obtint dans ce cas la disparition complète de la tumeur. L'auteur décrit les différents types de tumeurs rétropéritonéales et nous donne une revue de la littérature du sujet. Quoiqu'il soit indiqué de faire l'ablation des tumeurs rétropéritonéales opérables et de traiter les tumeurs inopérables par l'irradiation, une nouvelle méthode est recommandée pour le traitement des tumeurs benignes qui sont inopérables, vu leurs sites. Le traitement Elliott nous

parait logique et certainement mérite d'être employé. Avant de nous prononcer définitivement sur la valeur absolue de cette méthode, il faudra un rapport sur un grand nombre de cas dans lesquels la méthode aura été employé.

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SUMARIO

Se ha descrito uno tumor inoperable benigno retroperitoneal, probablemente de origen inflamatorio. Se ha detallado el tratamiento que el paciente recibió. La desaparición completa de dicho tumor con el tratamiento de Elliott es descrito por la primera vez.

Se ha hecho una descripción general de los varios tipos de tumores retroperitoneales con revista de la literatura.

Se aconseja la cirugía en todo tumor retroperitoneal que es operable combinada con la radioterapia post-operatoria cuando está indicada. También se aconseja la radioterapia exclusivamente en todo tumor maligno retroperitoneal que es inoperable. Se recomienda el nuevo método de tratamiento, que se ha descrito en detalle, para todos los casos de tumores benignos retroperitoneales que son inoperables por razón de su localización. Se sugiere que este nuevo método se practique en un número de casos para determinar su verdadero terapéutico.

Выводы

Автор описывает случай неудалимой ретрперитонеальной . опухоли воспалительног характера. Опухоль совершенно исчезла после лечения методом Еллиота. Автор описывает всевозможные типы рентроперитонеальных опухолей с разбором литературных данных. Удалимыя опухоли нужно подвергать операции и излечению. Злокачественныя опухоли, которых нельзя удалчть, нужно лечить излучением. Неудалимыя но доброкачественныя опухоли можно лечить новой методой, а именно Еллиота.

Mecanismos Cerebrales en Relación con la Desviación de la Conducta*

(Cerebral Mechanisms in Relation to Altered Conductivity)

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SUMMARY

(1) The cranial cerebral traumatism of the frontal region may bring distant psychic alterations; (2) the pre-morbid condition should be *studied previous to the accident*; and (3) the psychic changes, the presence of pre-morbid manifestations, added to the dysrhythmic *cortical condition, alter and modify* the personality, explaining the moral conduct and social behavior of these individuals.

EN LAS investigaciones psicobiológico-sociales que he tenido oportunidad de practicar como Jefe del Laboratorio Científico de Investigaciones, dependiente de la Procuraduría General de Justicia Militar de México, he encontrado alrededor de unos diez casos, aunque posiblemente más, y aún también más adelante tenga oportunidad de observar nuevos casos referentes a la deformación de la conducta social y militar de nuestros soldados. Aparentamente al tratar de la conducta moral del individuo en este lugar aparenta falta de relación y coordinación para con las labores netamente quirúrgicas de estas jornadas intelectuales. En realidad si tiene que ver pues el hecho primordial es que sufrieron estos individuos traumatismos en craneo de mayor o menor intensidad y parecer la región frontal fué la más du mente castigada.

Esta observación de orden etiológi la he hecho a posteriori y después de 6 y 10 años de haber acaecido estos tra matismos. En tres, el traumatismo f ocasionado por bala y en el resto p golpes o caídas del caballo.

Es bien sabido que hay dos clases síntomas en los traumatismos del cran Aquellos de orden neurológico y aquell de orden psicológico. Para el suscrito s mil veces más atrayentes estos últim síntomas ya que en ellos viene inbíbito deseo de conocer los mecanismos ce brales que nos dan idea, aunque c cierta relatividad, de las condiciones conciencia en que han quedado estos i dividuos.

Los individuos en investigación h sido procesados la mayor parte, por i subordinación. Antes del traumatis hemos investigado que habían sido su tos con automatismos militares bién e cajados, con percepciones que las ca taban normalmente y quizá hasta c cierta velocidad; las impresiones er captadas normalmente y en la actualid estos sujetos han transformado por co pleto su personalidad psíquica.

Sus automatismos militares no son bién encajados como anteriorm cierta falta de atención, hay a ellos cuyas percepciones capta rápidamente, lo que enrede en una conversación locuaz e interminable. El humor de una buena parte de estos individuos se ha hecho jovial y salta a la vista que aunque, detenidos por los automatismos militares de cuando en vez, olvidándose de su jerarquía inferior, especialmente me refiero a la calse de tropa, entran en una conversación con el investigador que casi se antoja familiar.

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Vuelven, nuevamente, a recordar su situación militar, piden una disculpa y readquiren su actitud militar; algunos se han vuelto olvidadizos y otros han hecho que su instinto de lucha y agresividad se haya modificado, unos se han vuelto notoriamente agresivos y a otros más les ha pasado lo contrario en la esfera de su instinto. No son cobardes tampoco, pero podríamos decir, tienen cierto tolerancia.

Individuos que habían dejado de ha[illegible]r durante algunos días han readquiri[illegible] el uso de la palabra. Son individuos que gustan de estar aislados, no simpatizan con el pragmatismo. Su juicio es notoriamente reducido. Su autocrítica igualmente y desde luego se deduce que la capacidad de síntesis es muy precaria.

El mecanismo psicológico de la producción del fenómeno de la insubordinación se debe a la disminución de la capacidad de síntesis y a que los automatismos militares no están ya bién encajados, o sea que los reflejos condicionados militares, han sufrido cierta desorientación y por final a que el instinto de lucha y agresividad ha sufrido también modificaciones importantes.

Vamos a pasar por alto el hecho intrínseco que corresponde al traumatismo, cualquiera que sea su tipo, pués indudablemente que al final de cuentas todos traen aparejadas ciertas modificaciones en el psiquísmo del individuo. Que son las que para el suscrito son interesantes.

Casi en la mayor parte de estos sujetos ha habido también dos fenómenos que paso a relatar y que son: las perturbaciones o modificaciones del sueño y la producción de alucinosis en algunos.

Antes de pasar adelante he deseado trasladar a este estudio algunas observaciones de orden psicofisiológico en operados de craneo y especialmente en el lóbulo frontal, aunque con anticipación quizá relativa pedí informes a Médicos mexicanos sobre las alteraciones de orden psicológico que hubieran observado personalmente en sus operados de craneo.

Hasta la fecha no he recibido ningún reporte, y solamente trasladaré aquí los casos de literatura extranjera. Esto como un apoyo más al conocimiento de la deformación psíquica que sufren o que pueden sufrir los individuos lesionados o modificados en los lóbulos frontales.

Insistamos: nuestros pacientes que en número de diez han sido objeto de nuestra investigación de orden psicológico, advertimos que en los diez, el fenómeno del sueño se encontraba completamente modificado o deformado, ésto es, el sueño no se verificaba sino en forma fraccionada, lo que quiere decir que despiertan con frecuencia durante la noche, y en algunos, posiblemente tres, la presencia de alucinosis también se verificaba durante estos momentos.

Otro síntoma que nos llamó la atención fué las alucinaciones criticadas a sea la alucinación que percibe el individuo por intermedio del órgano de la vista y así vé como aparecen caras desconocidas generalmente de animales, puntos, brillantes, pero lo que llama la atención es el conjunto, algunos me dicen: es un montón de gente, otros: haga usted de cuenta que estoy en una feria. Lo interesante en esta alucinación es que se presenta con mucha frecuencia a la caída de la tarde, y durante las horas que siguen.

Lo interesante también es que la aparición de estas alucinaciones no intimidan al individuo sino que con toda serenidad y tranquilidad ven pasar ese conjunto de caras y de arabescós sin que signifiquen para ellos ni una molestia, ni entra tampoco a functionar el juicio que indudablemente está más bajo que el normal, dado que durante la crítica que se hace de esta alucinaciones no son capaces *por medio de su autocrítica, a poner* en claro el porqué de aquellos fenómenos y si tienen trascendencia para su vida mental; asisten con indiferencia a la percepción de aquellas.

En un Capitán con traumatismo intenso que sufrió en su craneo hace varios años y que está incluído en estos diez individuos tiene el siguiente síntoma: hambre exagerada de tal manera que cuando a algún compañero le llevaban su alimento y esta Capitán se daba cuenta, tomaba con fruición aquellos alimentos que como ya dijimos no pertenecían a él y se los terminaba. De tal manera que, siempre que estaba el Capitán y llevaban alimentos para algunos otros compañeros, era menester esconderlos porque este paciente verdaderamente los devoraba.

En resumen en este caso encontramos el fenómeno del deseo de comer exagerado. En los diez pacientes también advertimos confusiones mentales que de cuando en vez aparecían, esas confusiones mentales hicieron que se les castigara por desobediencia a determinados mandatos, en realidad desobedecieron por el fenómeno ya dicho.

A un Teniente se le fué a encontrar por uno de nuestros rumbos de los bajo fondos sociales, sentado e indiferente. Era presa también de una cierta confusión mental.

Hemos procurado seleccionar estos pacientes que sufrieron traumatismos intensos hace años probablemente en la región frontal porque necesitamos artificializar por decirlo así nuestro estudio, pero ésto más bién en funciones didácticas para poder tener un punto de partida y de conocer lo más que sea posible la sintomatología de estos individuos, bajo el punto de vista psicológico.

Otro de nuestros investigados acusó una fuerte verborrea, una locuacidad muy exagerada, de tal manera que quedamos impresionados por este mecanismo cerebral que lo desarrolló, con tanta velocidad y con largo tiempo que su conversación, con muy frecuentes incoordinaciones, duró alrededor de una hora. La locuacidad se caracterizaba porque usaba de un lenguaje hasta cierto punto burlón para el suscrito, que era el investigador. Se olvidaba de que era yo su superior jerárquico. Haciendo esfuerzos, lo que significaba que fallaba su memoria de fijación y tal vez de evocación, se acordó que era su superior, me pedía una excusa por el tono en que se había expresado y seguía conversando y conversando de multitud de temas; es decir, este tipo se caracterizaba por su locuacidad y por el tono de burla en que lo hizo.

Debemos advertir que a veces era sumamente festivo, exteriorizaba un aire de superioridad de su yo psíquico, que no era otra cosa según Adler que un complejo de inferioridad.

En resumen, en este caso advertimos falta de atención, locuacidad, tono festivo y burlón, complejo de inferioridad, falta de memoria para unos hechos; exageración de imaginación.

Otros casos se caracterizaron psiquicamente, porque la tendencia de la personalidad, o la dominante de la advertimos que había una reversibilidad de la persona; en efecto algunos compañeros del paciente, me manifestaron que su compañero, de algún tiempo a la fecha, era otro; que ya no era el mismo me decían, no obstante que en la investigación psíquica es[illegible] [illegible] curría, pero [illegible] io inferior al n[illegible] ción y de [illegible] hechos probablemente era standard; su imaginación disminuída, los automatismos militares adquiridos en el momento de la investigación los encontramos muy mal encajados.

Debemos advertir que en los diez pacientes, los automatismos militares se encontraban mal encajados, es decir se había deformado la personalidad militar de estos individuos, no había en ellos ese distingo tan particular de los individuos que tienen automatismos militares bién encajados y normales, y que les dan un aspecto tan particular como es la actitud erecta del cuerpo, la voz de comando bién timbrada, precisa, la mirada penetrante y el aspecto de su cara debido a las contracciones o movimientos de los músculos del rostro, el aspecto de cierta agresividad de determinada autoridad jerárquica, el paso enérgico y los movimientos de sus miembros superiores denotan también precisión, se bosqueja automatismo y energía.

Muy por el contrario nuestros pacientes tenían en su rostro cierta serenidad, cierto aspecto a veces de fatiga, de humillación, que para ser precisos, debemos de manifestar que como son individuos internados en la prisión, son sujetos que han roto la disciplina militar, estos sujetos de investigación y todos aquellos que están internados, son poseedores de complejos de inferioridad, algunos de ellos gustan de encerrarse en sus celdas y de no participar en la vida social raquítica en el interior de la prisión.

Estos sujetos han indudablemente roto las tendencias instintivas, de cierto pragmatismo y por eso se les ve solos, callados.

En cuatro individuos encontramos fenómenos de cierta superioridad de su yo y con un sentimiento de intimidación muy exagerado. Cobardía probablemente nó. Se trataba de individuos con cierto prestigio militar, aguerridos en nuestras luchas intestinas, fueron digámoslo así todo unos hombres. Pero en la actualidad deformaron su personalidad. Paranóicos? Tal vez.

Repitiendo, volvemos a manifestar que en los individuos traumatizados del craneo hay dos órdenes de síntomas: las escencialmente neurológicas y que comprenden según Lhermitte las modificaciones del comportamiento motor, del equilibrio y de la mímica facial; pero a pesar de que no nos vamos a detener en ellas sí vamos a manifestar que los autores que se dedican a estas investigaciones, están de acuerdo en que necesitan todavía mejores revisiones, ésto quiere decir que no se ha llegado todavía al desideratum. Y los síntomas eminentemente de orden psíquico que son para nosotros como imán, nos atraen, nos detienen y nos hacen pensar en la profundidad de los mecanismos psicofisiológicos.

También aventuramos que en nuestros pacientes aunque el traumatismo fué llevado en la región frontal es evidente que traspasó los límites de esa región artificialmente didáctica. Y ahora entramos a interpretar los anteriores síntomas que aquejan a nuestros pacientes traumatiza dos del craneo.

Bajo el punto de vista psicológico, admitamos sin conceder, que el traumatismo se verificó exclusivamente en la region frontal hace algunos años. El paciente se conmocionó y con determinados cuidados llegó a adquirir el estado normal clínico probablemente, no el psíquico.

Sabemos también de antemano que la región frontal, es decir la de los lóbulos frontales es una zona de intelectualización quizá artificial, es un lugar en donde radican los mecanismos psíquicos de cierto linaje aristocrático.

En el mono la extirpación de los dos lóbulos frontales según Bianchi determina un conjunto de trastornos en las percepciones de los símbolos en la memoria; en la iniciativa, en la emotividad, disminuyen los sentimientos afectivos y sociales. En el animal las perturbaciones de la conducta son de difícil apreciación.

No así, en el hombre, las operaciones quirúrgicas llevadas al nivel de los lóbulos frontales, operaciones redactadas por Brickner de Nueva York nos ilustran sobre el anterior punto. Vgr. un individuo con un tumor que comprimiera los lóbulos frontales fué operado por Walter Dandy, Cirujano de John Hopkins Hospital de Baltimore. Después de la operación hubo esta sorpresa, de que la personalidad de aquél operado no sufrió grandes transformaciones, pués sus parientes y amigos reconocieron los mismos rasgos de su antigua dominante personalidad. En cambio relata Brickner que llamó la atención la relajación de la voluntad, el descencadenamiento fácil de las emociones, de los instintos. Una exageración del yo psíquico que como ya lo vimos en nuestra personal investigación, no es otra cosa que la exteriorización del complejo de inferioridad de Adler. Que al operado le era imposible sintetizar pensamientos y síntomas. Había falta de atención y memoria, fallaba en lo que se refería a evocación; también ya vimos estos síntomas en nuestros propios investigados.

Todas las desobediencias que hemos visto, en nuestros pacientes, no son sino floración de alteraciones psíquicas que en el paciente se despiertan uno y otro síntoma porque no puede detenerse ni puede hacer la síntesis de lo que está pasando, por eso unos tienen falta de atención, otros fallan en su memoria, etc. Lo principal es que su juicio está más bajo del normal y por tanto la síntesis no puede ser hecha. Por eso no se dan cuenta ellos de su situación, más adelante vamos a encontrar algún caso que no es de nuestra propia cosecha, en que la enferma ya operada, al preguntarle cómo está de su parte mental, contesta sin evasivas: cada vez que me animo a hacer una cosa, no hago más que estupideces.

En efecto para aquellos que pretendemos manejar asuntos de orden psíquico no obstante que vemos que los individuos traumatizados piensan más o menos, imaginan más o menos, atienden más o menos, todos ellos tienen aunque funcione su psiquísmo, más o menos normalmente, ese aroma, permítasenos la expresión, ese inconfundible perfume de la dominante de la personalidad, en esos momentos de cierta estupidez.

En Montreal la hermana de un gran Neurocirujano fué operada y sufrió una profunda mutilación en sus lóbulos frontales. Esta enferma relatada por el Dr. Penfield manifiesta que la actividad mental de la operada había mejorado, nada más que hacía una serie de cosas estúpidas. Como se vé en este caso que ya lo relatamos más arriba también, esa estupidez no es otra cosa que la ausencia de la capacidad para hacer la síntesis de las operaciones psíquicas.

En resúmen bajo el punto de vista psicológico los traumatismos de la región frontal traen una disminución de atención, de limitación de la capacidad de síntesis, de la actividad y de la aplicación pragmática, es decir producen una modificación de la personalidad.

Indudablemente que alteraciones de esta enjundia en el psiquismo del individuo es forzoso admitir, también que los traumatismos del craneo traen violaciones de la conducta social a distancia, ¿por qué razón? sencillamente porque si cambia la dominante de la personalidad es forzoso que cambie la dominante de la conducta que está en íntima relación.

Por eso en los sujetos de nuestra investigación cambió su conducta, de un tiempo a otro, ya no eran los mismos y aparejado a los síntomas psicológicos ya descritos aparece la modificación de su conducta militar. Unos rompieron el ritmo de los automatismos militares; había desobediencia. Otros rompieron el ritmo de la disciplina militar, se insubordinaron. Otros rompieron el ritmo de sus mecanismos cerebrales, no cumplieron las órdenes de incorporación, etc.

Para ser lo menos incompletos que nos sea posible en esta disertación manifestamos que en nuestros investigados hemos tenido especial cuidado en estudiar el estado pre-morboso, antes del accidente, tomando en cuenta la intoxicación alcoholica, la impregnación de una infección sifilítica o tuberculosa y los estados disrítmicos corticales y sus aliados que son los estados epilépticos, apileptoides y por aliados entendemos los estados de jaqueca, diabetes, estados sincopales o simplemente de mareos sin causa aparente justificada.

Los estados con alteraciones del sueño catapléxicos y desde luego declaramos que en nuestros pacientes se han presentado tales estados pre-morbosos, por lo que es fácil entender por qué se fincan las interrogaciones y las dificultades para aquellos individuos amantes del localizacionismo cerebral o sea aquellos investigadores que les a trae la creencia de que los campos cerebrales de Brodmann y de Oscar Bogt y Von Ecónomo constituyen el desideratum de los mecanismos cerebrales y psíquicos y forman de la corteza cerebral un precioso mapa con límites exactos. Sin embargo leyendo, estudiando, e investigando en los pacientes nosotros nos declaramos dentro de nuestro humilde campo de acción, no localizacionistas sino esencialmente centralistas, y por eso muchos de los síntomas psíquicos que aparentan refugiarse en los lóbulos frontales, tenemos, que poner punto y coma para trasladarnos al mesodiencéfalo, a las regiones del tercero y cuarto ventrículo cerebrales a fin de quedar más satisfechos, de quedar más a gusto en la interpretación de las alteraciones psíquicas que hemos relatado.

Indudablemente que cuando no es posible interpretar del todo por el funcionamiento del mesodiencéfalo los síntomas; entonces tenemos que hacernos localizacionistas especialmente cuando echamos mano del electroencefaló grafo para conocer los estados de disritmia cortical.

Hablabamos más antes de que las alteraciones psíquicas de los lóbulos frontales, entre otras se caracterizan por la modificación de la personalidad y cuyo fenómeno tiene que ser a priori constitucional y he aquí que los estudios de Berger y de Gibbs tienden a llegar también a la conclusión de que los electroencefalogramas llegan a tener una cierta condición de individualidad y por tanto de constitucionalidad. Esto quiere decir en otras palabras que las alteraciones del ritmo eléctrico cerebral de Berger y de Gibbs se caracterizan por las constantes, en un mismo individuo, del voltaje, y las dominantió de frecuencía por segundo, y de la presencia de ondas lentas y ganchos. Esto también significa, entonces que el ritmo es constante en un individuo y por tanto la disritmia también es constante en el mismo individuo, por todo lo cual llegamos a la conclusión de que también estos fenómenos eléctricos son constitucionales y aparejando lo que hemos dicho anteriormente a lo que acabamos de asentar la dominante de la personalidad del individuo se caracteriza por fenómenos psíquicos normales a patológicos y por el ritmo de sus ondas eléctricas cerebrales.

SUMARIO

(1) Los traumatismos craneo-cerebrales de la región frontal pueden traer a distancia alteraciones psíquicas. (2) Debe estudiarse el estado pre-morboso anterior al accidente. (3) Las alteraciones de orden psíquico, la presencia

de estados pre-morbosos manifiestos, añadidos a los estados disrítmicos corticales, alteran y modifican la dominante de la personalidad y por tanto la conducta moral y social de estos individuos.

RÉSUMÉ

Les traumatismes de la région frontale du crâne peuvent entraîner des altérations psychiques éloignées. L'état prémorbide précédant l'accident demande à être étudié. Les changements psychiques, la présence, de manifestations prémorbides modifient la personnalité et expliquent la conduite morale et sociale de ces individus.

Выводы

(1) Черенная мозговая травма лобной области может дать повод к отдаленным психическим измененениям;

(2) Психика пациента должна быть иследованна до момента травмы;

(3) Психические изменения, их существование перед моментом травмы, вместе с аритмическим корковым состоянием, изменяют личность индивидуума и об'ясняют его моральное и социальное поведение.

Treatment of Bleeding Peptic Ulcer

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HEMORRHAGE from a peptic ulcer is a dramatic incident which at times may be alarming to both patient and physician. This complication of peptic ulcer occurs frequently enough to warrant clinical study, in order to decrease the mortality to a minimum. The incidence of hemorrhage has been stated by various authors to vary from 10 to 30 per cent.

Gordon-Taylor[1] reported an incidence of 10 per cent; Turnbull and Sagi,[2] 16.3 per cent; Noth and Wilbur,[3] 20 per cent; Abrahams, Taylor and Bennett,[4] 25 per cent; Blackford and Cole,[5] 19 per cent; Eggleston,[6] 19 per cent; Goldman,[7] 38 per cent; Eliason and Ebling,[8] 19.5 per cent in duodenal ulcer and 39.1 per cent in gastric ulcer; Paterson,[9] 30 per cent; Mayo,[10] 17 per cent in gastric ulcer and 14 per cent in duodenal ulcer; Balfour,[11] 25 per cent in duodenal ulcer. In the present series the complication of hemorrhage occurred in 13 per cent of patients with gastric, duodenal or marginal ulcer.

The present study is limited to those patients who exhibited the more severe forms of the condition and the cases included manifested one or more of the following criteria: (1) gross hematemesis; (2) visible melena; (3) signs of shock; (4) a falling blood pressure or a very low blood pressure; (5) marked anemia; (6) syncope. Mild cases which presented occult blood in stools, or those with a doubtful diagnosis, were not included in this series.

One hundred and thirty-six cases of hemorrhage were admitted to the wards of the Metropolitan Hospital, 121 of which were treated by medical means. Among these were 14 readmissions.

Statistics: There were 114 white patients and 7 colored. The youngest
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were 19 cases; the third decade, 49; the fourth decade, 27; fifth decade, 18; sixth decade, 8. Thus one can readily see that bleeding from peptic ulcer is predominantly a disease of the comparatively younger age groups, a fact that other observers have noted (Goldman[12] and Crohn[13]).

In relation to sex, hemorrhage occurred in the ratio of 9.5 males to 1 female in the entire group. The distribution of the type of ulcer was as follows: duodenal, 93; gastric, 16; marginal cases, 8; combined duodenal and gastric cases, 4.

SYMPTOMATOLOGY

The signs and symptoms of bleeding peptic ulcers vary with the severity of the loss of blood and the rapidity with which this loss occurs. However, hematemesis and melena are the two outstanding cardinal symptoms. In this series of cases the duodenal ulcers presented melena in 15 per cent of the cases, hematemesis in 5 per cent and both melena and hematemesis in 80 per cent. In contrast to this, the gastric ulcer patients manifested hematemesis in 45 per cent of the cases, melena alone in 15 per cent, and both melena and hematemesis in 40 per cent. The fact that a patient presents either hematemesis or melena alone does not aid in localizing the ulcer on one side of the pylorus or the other, for most of our patients presented both symptoms. This is readily explainable on physiological grounds. A certain amount of blood present in the duodenum will regurgitate into the stomach. On the other hand, a moderate amount of blood present in the stomach will reach the rest of the intestinal tract after passing through the pylorus. However, in the presence of an obstructive lesion at the pylorus, one must not expect that both melena and hematemesis will occur.

As previously stated, the symptoms presented by the patient vary with the amount of blood lost and rapidity with which this takes place. Thus, if the loss occurs suddenly and is of large amount, the patient will present evidence of shock. Of our patients 23.4 per cent were in shock, as manifested by a critically low blood pressure, rapid pulse, cold and clammy *extremities*. On the other hand, if the hemorrhage has occurred over a reasonably long period of time, shock will not be present, but rather a severe grade of anemia. These patients present a pasty appearance, are very weak, and complain of increasing ulcer symptoms.

A previous history of ulcer is not a necessary criterion in making a diagnosis of bleeding peptic ulcer. In 25 per cent of our cases, bleeding has been presented as an initial symptom of ulcer. Careful investigation of previous histories failed to elicit any symptomatology referable to the gastro-intestinal tract.

FACTORS PREDISPOSING TO HEMORRHAGE

Food as a contributory factor plays no part in initiating the bleeding. In the present investigation the relationship of food to the production of hemorrhage could not be ascertained even after careful questioning of the patient.

Trauma as a cause in initiating the hemorrhage in peptic ulcer has taken on a new aspect in recent years, because of its relationship to the Workmen's Compensation Laws. Five per cent of the cases presented could be definitely attributed to trauma as the direct initiating cause of bleeding, as well as exacerbation of symptoms in a previously silent ulcer. In all instances of trauma the outstanding factor was sudden increase of intra-abdominal pressure. As specific examples, a colored patient working in a garage was suddenly attacked, receiving a forcible blow in the abdomen. Within a short period of time the patient began to complain of abdominal pain and passage of black stools, and upon investigation the patient was found to have a bleeding ulcer.

Another patient, a white male who for several years was known to have an inactive duodenal ulcer, lifted a very heavy weight, and in about eight hours noted the passage of a massive tarry stool. Following this he had a re-awakening of his ulcer syndrome. In another instance a patient who was free from any gastro-intestinal symptoms was in a violent explosion and immediately following the accident had typical symptoms of ulcer with profuse hematemesis and melena. Because of the profuse hemorrhage and inability to control it, surgical intervention was deemed necessary, and exploration revealed an acute bleeding duodenal ulcer without evidence of scarring around the area. The patient still has recurrent attacks of hemorrhage. The remaining two cases of trauma to the abdomen were followed by ulcer symptoms with bleeding from three days to two weeks following the date of the injury.

In 3 per cent of the cases in this series, *over-indulgence in alcoholic beverages* initiated the symptoms of bleeding in previously existing ulcers, the bleeding probably being due to either direct irritation of the ulcer or to hypersecretion.

While *acute infections* are frequently mentioned in textbooks and in the literature as an initiating factor in the production of bleeding in peptic ulcers, our own series failed to show any relationship.

RELATIONSHIP OF AZOTEMIA TO GASTRO-INTESTINAL HEMORRHAGE

The relationship of azotemia to gastro-intestinal hemorrhage is still a matter of controversy. The severity of the azotemia does seem to depend upon the extent of the hemorrhage and the time interval at which the blood is examined. In this series of cases 25 per cent of the patients showed an elevation of blood urea-nitrogen levels from 40 mgm. per cent to 55 mgm. per cent. In two cases the urea-nitrogen levels were as high as 85 and 95 mgm. per cent. These urea-nitrogen levels were determined upon admission of the patient to the hospital and redetermined at intervals of two to three days until the return to normal. Twenty-five patients who manifested azotemia were investigated for renal function and chloride deprivation. Renal function was determined by the Fishberg concentration test, and in only two instances, where the urea-nitrogen level was 85 and 95 mgm. per cent, was the *sp-gr* persistently 10-10. Both patients, however, had given a previous history of hypertension, and renal damage could not be eliminated. In both cases the urea-nitrogen level returned to normal, the patient making a complete clinical recovery with the return of the concentration test to within normal limits. Blood chloride levels were determined simultaneously with the urea nitrogen of the blood, and in only four of the patients were the levels below normal.

The mechanism of azotemia in gastro-intestinal hemorrhage has been investigated by numerous observers who have expounded widely different views as to its production. Sanguinetti,[14] who first observed azotemia in hem[illegible]
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it [illegible] the re[illegible]
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disturbs the osmotic equilibrium, and the urea is replaced to restore the osmotic pressure. Fishberg[17] attributes the azotemia chiefly to dehydration causing an oliguria. The blood volume of the kidney is too limited to keep pace with the excretion of urea formed in the body, and blood-urea nitrogen rises. Taylor and Lewis[18] demonstrated increased blood urea values in anemia following hemorrhage. Christiansen[19] ascribes the azotemia to resorption of toxic substances originating from accumulated blood in the intestinal tract and to chloride deprivation. Schiff et al[20] produced azotemia in normal subjects free from renal disease by feeding them citrated blood and found that the maximum urea-nitrogen level was obtained in ten to twenty-eight hours with return to normal in forty-eight hours. These results indicate that renal impairment plays no part in the production of azotemia. Kaump and Parsons,[21] working with dogs, produced simulated gastric hemorrhage and found that there was a dual rise in blood urea-nitrogen levels, the first occurring in twelve to twenty-four hours and the second elevation occurring in forty-two to forty-eight hours, with a return to normal within several hours. Chunn and Harkins,[22] working with dogs, feeding them separately whole blood, blood cells, serum and hemoglobin, have concluded that the rise in urea nitrogen is due mainly to the absorption of digested blood, especially of the erythrocyte fraction. They further conclude that the hemoglobin is the important factor in the urea-nitrogen elevation and that the plasma fraction plays a distinctly secondary rôle. These authors have advocated the term "alimentary azotemia," which in the light of their work and that of others appears to be appropriate.

From the clinical point of view and the recent experimental findings presented, it would appear that the mechanism of alimentary azotemia is probably due to the absorption of the digestion products of whole blood in the gastro-intestinal tract, and that renal impairment, hypochloremia, and hemoconcentration plays no rôle in the production of this type of azotemia.

Persistent azotemia is indicative of persistent bleeding, and the level of the azotemia bears a direct relationship to the severity of the hemorrhage. While renal insufficiency is not considered the cause of the azotemia, it is difficult to rule it out entirely, since these patients are prone to renal insufficiency because there is the possibility of renal damage from prolonged alkaline therapy, and also there are those with arterial sclerosis who are especially apt to continue bleeding once it begins. However, *the level of the azotemia cannot be regarded as a prognostic index,* since it has been our experience that patients with extremely high urea nitrogen, while having a stormy clinical course, have made a recovery, and the fatalities occurred in patients where the urea-nitrogen level was moderately above normal limits.

TREATMENT

Since the advent of the Meulengracht regimen, the treatment of gastro-intestinal hemorrhage from ulcer has taken on a new aspect.

Up to 1937 the treatment of gastro-intestinal hemorrhage, as practiced in the wards of the Metropolitan Hospital, was that of starvation with the usual supportive measures consisting of transfusion, parenteral fluids and alkalis. There were 56 cases treated with this method with a mortality of 6.9 per cent. On the other hand, 65 cases treated with the Meulengracht diet and supportive measures since 1937 resulted in two mortalities, one of which was questionable, since the ulcer perforated while the pa-

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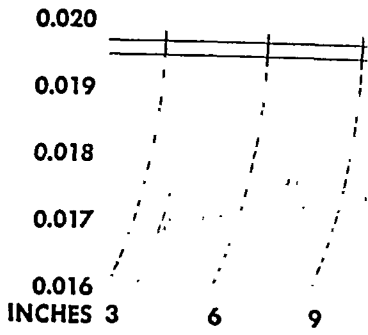

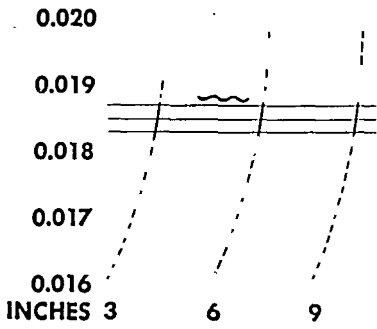

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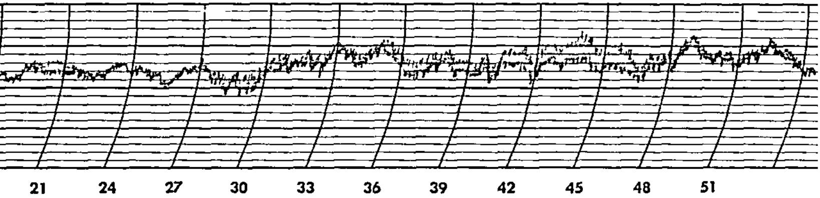

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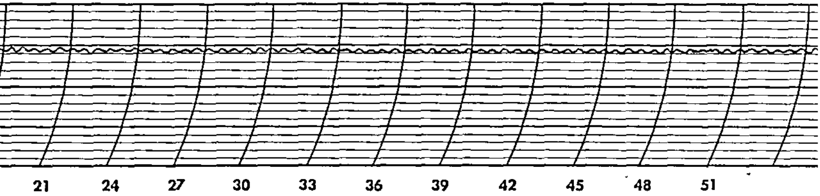

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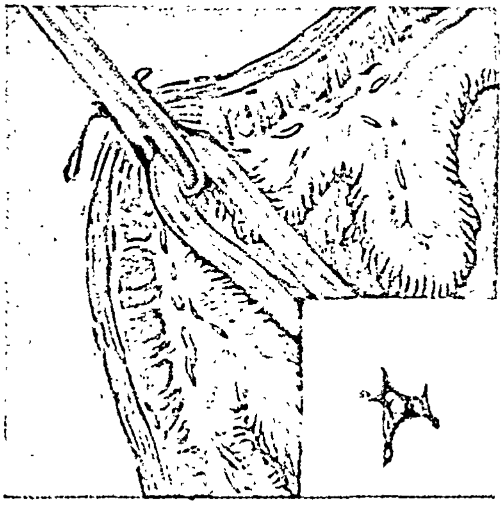

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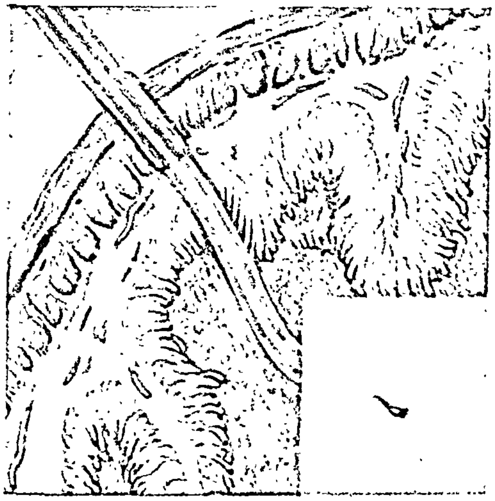

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Suture Laboratories at New Brunswick, N. J.; Chicago, Ill.; Brazil; Argentina; England; Australia tient was in the ward, and one cannot attribute this mortality to hemorrhage. Assuming that this patient's death could be caused by the hemorrhage, which is highly doubtful, since his picture was that of perforation, the mortality would be reduced to less than one-half that of the older method of treatment.

In addition to the lowering of the mortality by means of the Meulengracht diet, there was a decided shortening in the number of hospital days. In the starvation group there was an average of 38 hospital days, as compared to 28 days for those patients treated with the Meulengracht regimen.

It is needless to discuss at length the mortality statistics as given by various observers, since the variations are so wide and the criteria used are so different that one is in doubt as to whether these observers are dealing with the same type of cases. In arriving at a conclusion as to the efficacy of one or another method of treatment, one must necessarily evaluate various methods of treatment in the same institution where the cases selected were of the same type for both methods. This clinical investigation is not a study of comparative statistics, but rather an evaluation of two methods of treatment in the same institution where both have been given a fair trial. With this point of view one cannot help but be impressed by the decided lowering of mortality with the Meulengracht regimen.

RATIONALE OF TREATMENT BY FEEDING

The principle of feeding in bleeding peptic ulcer was advocated many years ago. Lenhartz[23] in 1904 advocated a larger number of calories and a higher protein intake. But because of traditional timidity the profession was rather reluctant in accepting this mode of treatment. Andresen[24] in 1927 gave a new impetus to the feeding aspect in the treatment of gastro-intestinal hemorrhage by giving his patients gelatin-water mixtures at two-hour intervals followed up in several days with other nutritious feedings. However, the brilliant results published by Meulengracht[25] in 1933 have reawakened the interest of the profession in this phase of treatment. The principles upon which Meulengracht based his dietetic regimen have been ably summarized by Boyd, et al[26] as follows: (a) the more carefully the old inanition regimen was carried out, the weaker the patient became and the higher the mortality; (b) ulcer patients often remained ambulatory after severe melena without appreciating the significance of "tarry stools" and without change in diet; (c) since post-hemorrhagic shock and post-hemorrhagic anemia form the most urgent indications for treatment after massive hemorrhage, the appropriateness of inanition, of limited fluids, salts, calories and vitamins is questionable; (d) it is doubtful whether emptiness of the stomach and the presence of unneutralized acid is suitable for hemostasis or for healing; (e) it is scarcely conceivable that an insufficient diet will promote regenerative processes.

The above enumerated clinical observations have been amply borne out by experimental evidence. Whether an empty stomach is at rest is a debatable question. Carlson[18] is of the opinion that it is not. Since Carlson's experimental evidence is so convincing, then filling an empty stomach is rational in inhibiting peristalsis and thus preventing the dislodgement of the blood clot. Overgaard[27] has shown in dogs that experimental histamine hypersecretion or the administration of hydrochloric acid produces [illegible] loric gastritis in the emp[illegible] not when the animal [illegible] diet. Alvarez[28] is of th danger of digesting the clot is greater han that of mechanical dislodgement. Therefore, feeding would overcome hese difficulties, namely, the mechanical dislodgement of the clot and its digesion. Elman[29] has shown that in fasting dogs after severe hemorrhage there is a definite hypoprotenemia, which is restored in a few days after the ingestion of an adequate protein diet. Furthermore, Whipple et al[30] have shown that anemic dogs regenerate blood much more rapidly on certain diets, especially those containing meat and liver, than when hey are fasting or are fed carbohydrates and milk. In addition, patients hat are in shock have further destrucion of protein, as shown by Whipple.[31]

The Meulengracht diet, as employed at he Metropolitan Hospital, consists of a high protein, high caloric diet, and is surprisingly well tolerated by patients. An aversion to the diet is seldom seen.

The primary consideration as the patient is admitted to the ward is the clinical evaluation of the presence or absence of shock. It has been the practice in the wards of the Metropolitan Hospital to give a patient in shock from a bleeding peptic ulcer small transfusions and morphine. However, the amount of blood given by transfusions never exceeds 250 c.c. and is repeated at intervals with the blood pressure level taken as a criterion for further transfusions. On the other hand, patients that manifested hemoconcentration with hemoglobin of more than 100 per cent were given parenteral fluids which resulted in the dropping of the hemoglobin content to anemic levels. The further use of transfusion after the patient had recovered from shock depended upon the extent of anemia present.

Alkalis, antispasmodics, iron and vitamins are given routinely.

In summary, the routine treatment of bleeding peptic ulcer in the wards of Metropolitan Hospital is as follows: (1) small frequent transfusions and sedation in presence of shock; (2) immediate institution of the Meulengracht diet; (3) parenteral fluids in the presence of dehydration; (4) the administration of alkalis, anti-spasmodics, iron and vitamins.

SUMMARY

(1) There were 136 cases of bleeding peptic ulcer in the wards of Metropolitan Hospital. One hundred twenty-one cases, including 14 readmissions, were treated medically.

(2) Symptomatology varied according to the rapidity with which the blood loss occurred, the cardinal symptoms being hematemesis, melena, and in certain cases (25 per cent), shock.

(3) The peak of incidence of bleeding peptic ulcer occurred in the third and fourth decades.

(4) Food, and acute infections are not important predisposing causes of bleeding in peptic ulcer. Alcohol and trauma apparently may be precipitating factors in establishing either a new bleeding ulcer or reawakening a previously healed ulcer.

(5) From recent investigative work and clinical observations in this series of cases, alimentary azotemia is probably due to the absorption of the digestion products of whole blood and especially the hemoglobin fraction; renal impairment, hypochloremia, and hemoconcentration play no part in the production of azotemia. A persistently high blood-urea nitrogen is indicative of further episodes of bleeding. The level of urea nitrogen cannot be used as a prognostic index.

(6) The cases treated up to 1937 by supportive measures and starvation gave a mortality of 6.9 per cent. On the other hand, in cases that received the Meulengracht regimen, the mortality

was reduced to less than one-half that of the older method of treatment. The *feeding treatment not only* lessens the mortality, but also shortens the average hospital days from 38 to 28.

(7) The principles on which the rationale of the feeding treatment has been based have been summarized.

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SOMMAIRE

1. Dans les salles de malades du Metropolitan Hospital il y eut 136 cas d'ulcères peptiques saignants. Cent vingt-et-un cas, dont quatorze cas étaient récidivants, furent soumis à un traitement médical.

2. La symptomatologie varia selon la rapidité de la perte de sang. Les principaux symptômes furent l'hématémèse, l'hémorrhagie intestinale (méléna), et dans 25 pour cent des cas le choc.

3. La troisième et la quatrième décade fournirent le plus grand nombre de cas.

4. Les aliments et les infections aigües jouent peu d'importance comme agents prédisposants à l'hémorrhagie dans les cas d'ulcères peptiques. L'al*cool et le trauma peuvent déterminer un* ulcère saignant ou provoquer une récidive dans un ulcère apparemment ou précédemment guéri.

5. D'après les plus récentes recherches expérimentales et cliniques, l'azotémie alimentaire est probablement due à l'absorption des produits digestifs du sang et surtout de l'hémoglobine; l'insuffisance rénale, l'hypochlorémie et l'hémo-concentration ne jouent aucun rôle dans la production de l'azotémie. Un haut urea nitrogène du sang est un signe avant-coureur d'hémorrhagies.

6. Le traitement employé jusqu'en 1937 affamait le malade et donnait une mortalité de 6.9 pour cent. Le traitement par le régime de Meulengracht diminua la mortalité de plus de la moitié. En nourrissant le malade on diminue la *mortalité et on abrège le* séjour à l'hôpital de trente-huit jours à vingt-huit jours.

7. L'auteur nous donne les raisons basiques *du traitement de l'ul* peptique par l'alimentation.

SUMARIO

1. Ciento treinta y seis casos úlceras *hemorrágicas pépticas* fu[illegible] admitidos al Metropolitan Hos[illegible]. Ciento veinte y uno de los casos, [illegible] endo catorce recidivas, fueron [illegible] a medicamente.

2. La sintomatología varió [illegible] directa con la rapidez y severidad de la hemorragia. En general los síntomas cardinales fueron los siguientes: [illegible] temesis melena y en un 25 por ciento shock.

3. El pico de la incidencia [illegible] serie ocurrió en la [illegible] década de la vida.

4. La alimentación [illegible] agudas no parecen [illegible] [illegible] de [illegible]

alcohol y el trauma parecen ser factores precipitantes de la hemorragia.

5. Según las investigaciones recientes y observaciones clínicas de nosotros en esta serie de casos, la azotemia, cuando se presenta, se debe probablemente a la absorción intestinal de la sangre digerida y especialmente a la hemoglobina. Esta azotemia, por lo tanto, no se debe a la insuficiencia renal, ni tampoco a la hipocloremia o a la hemo-concentración. La elevación persistente de la urea de la sangre es indicativo de más episodios hemorrágicos; sin embargo, el nivel de la urea no debe considerarse como un índice del pronóstico.

6. Los casos tratados hasta el año de 1937 con medidas soportivas y dieta absoluta presentaron una mortalidad de 6.9 por ciento y, en general, un período hospitalario de treinta y ocho días. Con el régimen propuesto por Meulengracht ha logrado reducir la mortalidad a menos de la mitad y el período hospitalario a veinte y ocho días.

7. Se ha presentado en forma de resumen los principios de este régimen de tratamiento dietético.

Выводы

(1) Из 136 случаев геммрогической пептической язвы, 121 были лечены консервативно.

(2) Кровавая рвота, кров в кале и шок у 25 процентов случаев составляют главные симптомы.

(3) Пациенты возраста третьяаго и четвертого десятилетия находились в большинстве.

(4) Пища и инфекции не предрасполагают к кровотечению язвы. Алкоголь и травма могут служить провокаторами его.

(5) Алиментарная азотетемия происходит как результат всасыбания продуктов переварения крови. Повреждение почек, гипохлоремия и геммоконцентрация не играют роли в азотемии.

(6) Смертность при лечении голоданием (до 1937 года) дошла до 6.9 процентов. При лечении по методе Меулингратт'а смертность понизилась на половину. Число дней в госпитале также понизилось от 38 до 28 дней.

Ulcer and Cancer of the Stomach in the Middle Ages

(Avenzoar, Averroës, Franciscus of Piedmont, Benivieni)

HYMAN I. GOLDSTEIN, M.D.
CAMDEN, NEW JERSEY

D*IOCLES* of Carystos (fl. *ca.* 350-310 B.C.?) described the *clinical symptoms of ulcer of the stomach.* Diocles was born in Carystos, on the island of Euboea, the son of Archidamus, a physician. Galen (130-200 A.D.) quotes Diocles [Galeni de affectorum locorum notitia, libri sex, Guilielmo Copo Basileiensis interprete, Paris, Henricus Stephanus, 1513. Liber III, Cap. VI, De Melancholia, f. 58 verso and f. 59:] "Verum satis mihi fuerit, ea accidentia percurrere, quae a Diocle praescripta sunt, in libro cui titulus est, affectio, causa, curatio, in quo Diocles ad verbum ita scripsit: Porro alius oritur a ventriculo morbus . . ." "Item ructus *acidus*, flatus, aestus in praecordiis, fluctuatio non illico, sed cum retinuerint interdum ventriculi quoq; vehementes dolores, qui nonnullis ad dorsum usq; procedunt, concoctis deinde cibis quiescunt..."

Paulus Ægineta (625-690) in his Book III, Sect. XXXVII, discusses "On Affections of the Stomach"; "When there is an *ulcer* of the *stomach* or bowels, the patient must abstain from all acrid food and drink, and use remedies of a soothing nature such as draughts without oil, and those from starch, *Samian earth, Lemnian earth* and *milk,*—(like our "modern" therapy of kaolin, magnesium trisilicate, and aluminum hydroxide!) — or a small quantity of honey, so as to purge without griping..."

"You may know an ulcer exists by blood, pus, or the scabs of a sore being vomited up." This was twelve centuries ago! *Celsus* (*ca.* 30 B.C.—25 A.D.?) gave somewhat similar advice for the treatment of ulcer of the stomach.

It is of historical and therapeutic interest to note here that the use of astringents, antacids and absorbents in the treatment of gastritis and ulcer of the stomach, which we consider "modern antacid therapy," has been advised and long used, by Paul, Serapion (9th century), Albucasis (1013-1106), Rhazes (850-932?), Haly Abbas (*ca.* 930-994), Francis of Piedmont (died 1319), Jean Fernel (1497-1558), Jacobus Hollerius Stempanus (died 1562), Crato (1519-1586), Van Heurne (1543-1601), J. Varandaeus (died 1617), J. Scultetus (1595-1645), J. Schenck (1530-1598), Jean Riolan (1539-1605), Horatius Augenius (1527-1603) and others since *Isaac Judæus* (Israeli, *ca.* 850-950) wrote his work "On Diet" (first edition, Padua, 1487). They recommended *terra Sigillata* (kaolin or aluminum silicate), *boli armeni, acaciae ablutae* et *aluminis iameni* [Serapion, eleven hundred years ago! *Breviarum Medicinae Practica,* Venice, 1497). Rhazes used *boli armeni* in the treatment of "ulcera in stomacho" (*Liber Divisionum,* Cap. LIX)].

Albucasis (1013-1106) in *Liber Practice,* Tractatus XVI, Cap. IV, discusses "De Dolore Stomachi" and Cap. V, "De Apostematibus Stomachi," etc.

We are concerned in this brief historical review with the works of Avicenna (980-1037), Avenzoar (*ca.* 1090-1162), Averroës (*ca.* 1126-1198), Franciscus of Piedmont (died 1319?), Antonio Benivieni (1443?-1502), Jean Fernel (1497-1558) and Capivaccius (died 1589). We cannot, however, omit mention of the observation of Alexander Trallianus (*ca.* 525-605?), that disorder of the stomach affects sympathetically the heart and brain, and treats fully inflammation of the stomach.

Caelius Aurelianus (3rd-4th centuries?), born at Cicca in Numidia, practiced in Rome, discussed "De Stomachicis" and "De Phagedoena," tumor, colics, jaundice and dysentery, in his "*Tardarum passiorum libri* (Chronion, Lib. III, Caput II, 73-78, Caput III, 78-79, Basileae, Petrus, 1529).

Joannes Actuarius (13th century), Byzantine physician and philosopher, son of Zacharius, discussed "haematemesis" and "melaena" more distinctly than other ancient authorities (*Meth. Med.* IV, 5; *De Diagnosi* I, 39).

Vincent of Beauvais (1206?-1264) discusses "De regimine pectoris et stomachi cordisque et epatis acrenum" (Lib XIII, Caput XXII) and "De Vomitu" (Lib. XIII, Cap. XI), diet and purgation (Lib. XIII, Cap. XV) in his "*Speculum Doctrinale*" ("Mirror of Science"), "Nüremberg, Anton Koberger 1486. (Section on Medicine, Books 12-14 456 Chapters, a great encyclopaedia of 17 books and 2374 chapters, considered one of the greatest monuments of learning of the [illegible] A[illegible]

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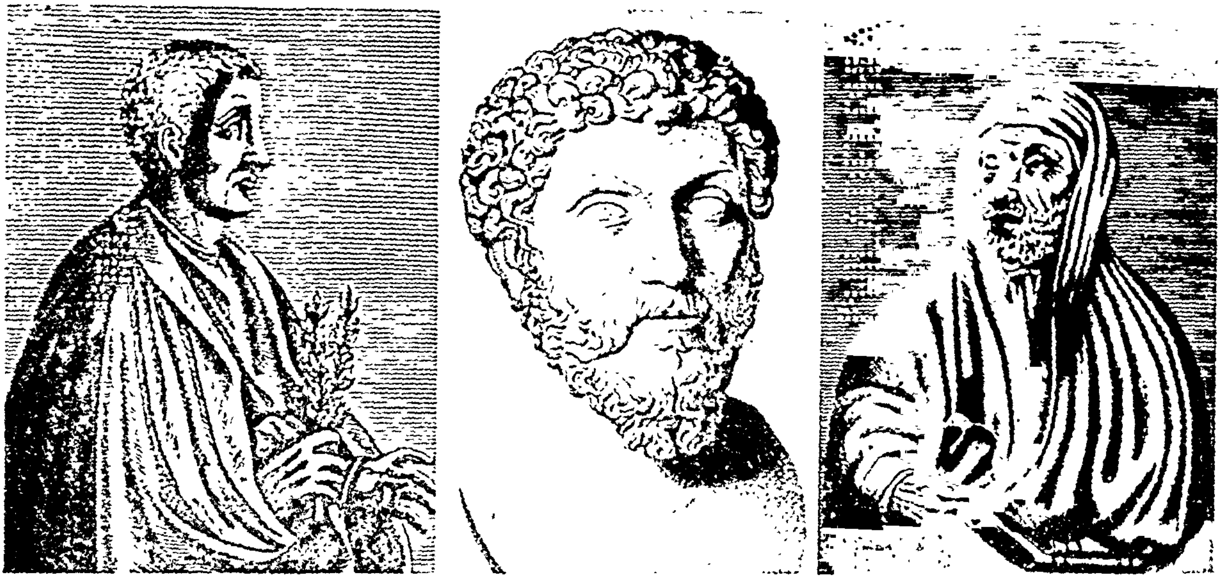


Fig. 1. Quintus Horatius Flaccus (68-65 B.C.). Marcus Aurelius Antoninus Caesar (121-180 A.D.). Avicenna (980—1036 or 1037 A.D.).

stories of patients date from the close of *the 4th century B.C.*:

n the second pillar appears Case 7: man with an *ulcer in his stomach.* incubated and saw a vision; the god eemed to order his followers to seize and hold him, that he might incise his stomach. So he fled, but they caught and tied him to the door-knocker. Then Asklepios opened his stomach, cut out the ulcer, sewed him up again, and loosed his bonds. He went away whole, but the floor of the chamber was covered with his blood." Withington (1894) states "the case is purely theurgic—it shows the direct action of the deity." (Originals published in the *Ephemeris Archaeologike*.1883-1885; French transl. by Reinach, Revue Archéologique, 1884-1885).

Emperor Marcus Aurelius (121-180) died in Vienna, perhaps from gastric (ulcer) carcinoma or perforated ulcer aggravated by his battles. He suffered from "acute indigestion" on returning from his wars, just as our soldiers today suffer from aggravated gastric disturbances.

Oribasius (325-403 A.D.), physician to Emperor Julian (355 A.D.) in his *Synopseos* (Liber IX, Cap. X, XI, Cap. XIX, XX, XXI) discusses "De oris ventriculi affectionibus," "De flatu ventriculi," "De iecoris affectionibus," "De scirrho iecoris."

Aëtius (502-575) in his *Tetrabiblos* III, Sermo I, Cap. XVI, and Cap. XVII, considers "De stomachi inflammatione" and "De stomacho *exulceratio.*"

Avenzoar (1090-1162) was a highly educated (Jewish?) physician of cultural family, born in Seville (E. R. Long, 1928). He was the most original of the Arabs next to Rhazes (850-932?) and probably the greatest Moslem physician and thinker of the twelfth century. His chief work, the *Liber Theisir or Assistance* contains (Book I, Tract. XV, cap. 3) a description of the case of one of Ali ben Jussuf's (1106-1143) courtiers. This courtier of the bigoted Almoravide (Ali) had long suffered from an obscure disease, with indigestion, loss of flesh, and occasional fever. Avenzoar, who with his father, was imprisoned and tormented by the

Ali, was forced to treat this man. He found him much prostrated with a slow, irregular, serrate pulse. In the epigastric region he found a round hard mass like an apple, painful on deep pressure. Avenzoar (Abhumeron) diagnosed cancer of the stomach ("Veruca stomachi") and saw he would die, but feared to tell him. One night the courtier had sudden hemorrhage from the bowel and Avenzoar found him collapsed—"he will die in twelve days . . ." He died on the ninth day. He was the first to use esophageal sounds (cannulas) in cancer of the esophagus for milk feeding (*Liber Theisir*, Liber I, Tract. X, Cap. XVIII, Venice, 1490 and 1497): "Quod est privatione sensus et motus relaxatione meri isofagi." Avenzoar discusses "De passionibus stomachi," (Liber primus, Tractatus XV, Cap. 1 — Cap. VI) — "de ethica stomachi," "de apostemate stomachi," "de veruca que oritur stomacho," etc. He was superintendent of the hospital at Seville, and had occasion to treat a man with cancer of the stomach, who was very weak and emaciated.

His pupil *Averroës Cordubensis* (1126-1198), born in Cordova, was a famous Spanish Moslem physician who wrote *The Colliget* or "Book of Universals" (Kitab-al Kollyat), a résumé of medical science. He was a contemporary of Moses Ben Maimon (Rambam) or Maimonides (1135-1204), and was a devoted commentator on Aristotle (384-322 B.C.) In his *Colliget* (Liber quartus, Cap. LIV), Averroës discusses "Quod est signis egritudinum stomachi:"Apostemata" and "Ulcerationes." Fernel (1497-1558) considered "Apostemata" (or abscess) to be cancer. Averroës speaks of ". . . Et apatibus q. in stomachi cancerosa fiunt sine dolore . . ." He treats of ulcer of the stomach somewhat the same as *Avicenna* (980-1037) in his *Canon of Medicine* [*Canonis Medicinae*, Venice, Petrus Maufer, 1486, Liber III, Fen. XIII, Tract. IV, Cap. XII and Cap. XIV].

Franciscus de Pedemontis (1270?-1319), learned commentator of Mesuë, gives a very accurate account of ulceration of the stomach. In *Messuë Demascenus, J. Opera Universa*, 1479, Cap. 13, "de solutione continuitatis stomachi et ulceribus: et ruptura: et eius cura.")

Fig. 2. Aulus Cornelius Celsus (*ca.* 53 B.C.—7 A.D.). Jean Fernel (1497
690 A.D.).

He compiled the best textbook of the time on pathology and therapeutics. He uses alumen, lutum armeni, lutum sigillatum.

HIERONYMUS CARDANUS MEDIOLANENSIS MEDICINÆ DOCTOR
ÆTATIS LXXI

Fig. 3. Jerome Cardan of Milan (1501-1576).

Antonio Benivieni's (*ca.* 1443-1502) records of necropsies were published by his brother Jerome in 1507, in the first printed book on pathology, *De Abditis Nonnullis ac mirandis morborum et sanationum causis,* Venice, 1507 and 1516. He requested permission of his patients' relatives to perform necropsies in obscure cases. To him we owe much of the beginning of the study of gross pathology and pathological anatomy. He was perhaps the first to consider opening bodies for the purpose of finding the location and causes of death of the patients. His posthumously published work (*Concerning some of the secret and strange causes of Disease* contains observations on cancer of the stomach ("Stomachum obcalluisse," Cap. XXXVI), gall-stone, and heart diseases.

He was one of a group of early "clinician-pathologists" including Benivieni, Eustachius (1524-1574), Rembert Dodoëns (1507-1585), Marcellus Donatus (*ca.* 1540-1590?), Jean Fernel (1497-1558) who wrote *Universa Medicina* (1554), Hieronymus Capivaccius (died 1589), Felix Plater (1536-1614) and Schenck (1530-1598). Benivieni (No. XXXVI) reports that a relative by marriage vomited everything, being unable to retain food or medicine, gradually wasting away to skin and bone and finally dying. At necropsy ("in the interest of the public good") he found an induration of the stomach reaching to the pylorus and preventing the passage of food. (A cancerous obstruction of the pylorus!) Three hundred years earlier, Avenzoar, as stated, gave an accurate description of cancer of the stomach ("Veruca stomacho") and of the esophagus.

Avenzoar had used silver and tin esophageal sounds to feed milk to the patients with esophageal obstruction, and used nutritive enemas in tumors of the stomach and esophagus.

Girolamo Capivaccio (died 1589), native of Padua, in his *Practica Medicina* (Francofurti, P. Fischer, 1594, Liber III, Cap. I—Cap. V) discusses "De Tumore Ventriculi," "De Ulcere Ventriculi" and "De Laesa deglutitione: quae oesofagi est affectio."

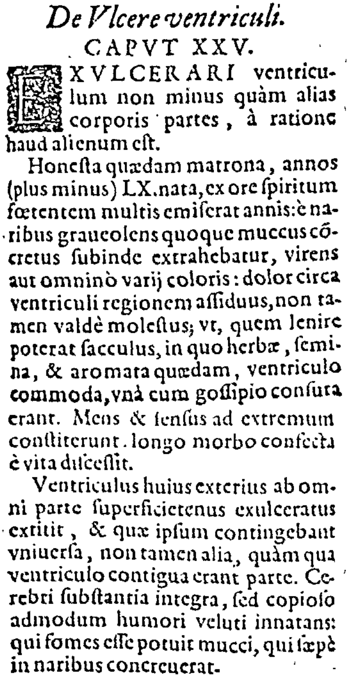
Felix Plater (1536-1614), the Basel anatomist, performed many autopsies (300 or more), and made some interesting observations including ulcer and tumor of the stomach.

Jean Fernel (1497-1558) of Amiens, wrote the first book to be called a text of "pathology," his *Pathologae,* Libri VII (1554). He speaks of cancer of the stomach (as "abscess," "apostemata") and ulceration of the tumor, of gastric ulcer, and scirrhus tumor (*Universa Medicina,* Liber VI, Cap. I-III, in "De Partium Morbis et Symptomatis").

Marcellus Donatus (*ca.* 1540-1590?), of Mantua (*De Medicina historia Mirabili,* Mantua, 1586) reports one of the best-described cases of ulcer of the stomach (the case of Camillus Facinus, 59 years old).

Donatus gave us the first good description of cancer of the rectum—in an old man, severely constipated, and whose rectum was not permeable to a wax candle. At necropsy in the upper part of the rectum, which was severely contracted, was found an elevated gland-like tumor.

Fig. 4. Rembert Dodonaeus (1517-1580) reported posthumously on "Ulcer of the Stomach" (1581).



De Vlcere ventriculi.

CAPVT XXV.

EXVLCERARI ventriculum non minus quàm alias corporis partes, à ratione haud alienum eſt.

Honeſta quædam matrona, annos (plus minus) LX.nata, ex ore ſpiritum fœtentem multis emiſerat annis: è naribus graueolens quoque muccus cõcretus ſubinde extrahebatur, virens aut omninò varij coloris: dolor circa ventriculi regionem aſſiduus, non tamen valdè moleſtus; vt, quem lenire poterat ſacculus, in quo herbæ, ſemina, & aromata quædam, ventriculo commoda, vnà cum goſſipio conſuta erant. Mens & ſenſus ad extremum conſtiterunt. longo morbo confecta è vita diſceſſit.

Ventriculus huius exterius ab omni parte ſuperficietenus exulceratus extitit, & quæ ipſum contingebant vniuerſa, non tamen alia, quàm qua ventriculo contigua erant parte. Cerebri ſubſtantia integra, ſed copioſo admodum humori veluti innatans: qui fomes eſſe potuit mucci, qui ſæpè in naribus concreuerat.

Fig. 5. Rembert Dodonaeus (1517-1580) from his *Medicinalium* (1581): "*De Ulcere Ventriculi.*"

J. Schenck (1530-1598) in his *Observationum medicarum rararum,* Libri VII, refers to Avenzoar's "Veruca Ventriculi," and reports on ulcer of the stomach.

Rembert Dodoëns (1517-1585) considers tumor and ulcer of the st
"De Ulcere V li,' *M*

nalium Observationum, Cap. XXV, pp. 61-62, 1581. Thomae Henrici). *L. Phryesen* or Fries (died 1532) discussed tumor and ulcer of the stomach (*Spiegel der Artzney desgleichen,* pp. 133-134, Strassburg, 1518). *Horatius Augenius* (1527-1603) reported the case of a young stewardess of excellent appearance (pregnant at term), who died of a perforated ulcer of the stomach, and the baby was delivered alive immediately after the mother's death and continued to live, and so was named FORTUNATO!

Ibnu'l-Wafid, or *"Aben Guefit"* (*ca.* 997-1074), a hospital physician at Toledo, developed a rational method of treatment based mainly upon *dietetic measures.* The best known of his works is *De Medicamentis simplicibus.*

The emperor Kai Kubad was at'nded by a Byzantine physician named tephen of Odessa, who also had the ask of schooling the young Anushirvan. That sovereign on coming to the throne, chose as his personal physician a Roman named Tribunus whom he valued so highly that, when he negotiated a five years' truce with Rome, he stipulated that Tribunus was to return to his service. The custom of employing Greek doctors survived the Islamic times, for we find that al-Hajjaj ibn Yusuf, the Arab conqueror of Persia, had attached to him a Greek physician whom the Arab biographers named Thiyazuq (?Theodokos). His is the first recorded case of a gastric test meal. For when his master was ill with indigestion, he made him swallow a lump of meat at the end of a string. After half an hour he pulled up the string and found the meat riddled with worms. He thereupon declared the case to be one of cancer of the stomach. And in due time al-Hajjaj died of it. (*Ibn Abi Usaybi'a;* C. Elgood, 1939).

Jules Péan, (French surgeon) performed (April 5, 1879) the first gastric resection for cancer of the pylorus. The patient died after four days. Billroth, on January 29, 1881, performed the same operation (Péan-Billroth No. I). His patient died of carcinomatous peritonitis in less than four months.

Fig. 6. Hieronymus Capivaccius (Jerome Capo Di Vacca or Capivaccio) (died 1589). In his *Practica Medicina,* 1594, Frankfort, Book III, Chaps. IV and V, he wrote on "Tumore Ventriculi" and "Ulcere Ventriculi."

The story, though fascinatingly interesting, is long, time is short, and space is limited, so we must, reluctantly and hesitatingly, close this rather kaleidoscopic historical review of ulcer and cancer of the stomach in the Middle Ages.

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Pathology. Williams

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SUMARIO

El estudio de la literatura médica durante la Edad Media revela que tanto la úlcera como el cáncer del estomago fueron reconocidos durante la época de Diocles Carystius (350-310 B.C.) Varios casos y varios métodos de tratamiento son descritos en la literatura de esa época y durante el tiempo que sobrepaso hasta la época épica en que Billroth practicó su método operatorio del cáncer del píloro en el año de 1881.

SOMMAIRE

Goldstein nous présente une revue de la littérature du traitement de l'ulcère de l'estomac et aussi du traitement du cancer gastrique. Il couvre la période du Moyen Age. Ces maladies sont connues depuis le temps de Diocles Carystius (350-310 B.C.). De différentes cas et de différents traitements son décrits dans la littérature médicale. L'opération de Billroth pour le cancer du pylore en 1881 est une contribution époquale.

Выводы

Язвенная болезнь желудка и рак желудка уже были описанны в средневековой литературе. Там-же встречаются описания единичных случаев и их лечение вплоть до операции Бильрота произведенной в 1881-ом году по поводу рака привратника.

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Backward Displacement of Thoracic and Lumbar Vertebrae

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IT is often only with difficulty that a backward displacement of one or more vertebrae is diagnosed. The displacement is usually disclosed by pain in the region of the upper lumbar and lower thoracic spine, radiating into the abdomen; also by an impaired function of the spinal column. As is shown by e following case history, diagnostic well as therapeutic errors may easily be made. A closer study of this condition is of particular importance at present, when the problem of posterior herniation of the nucleus pulposus is occupying a great number of authors.

CASE REPORT

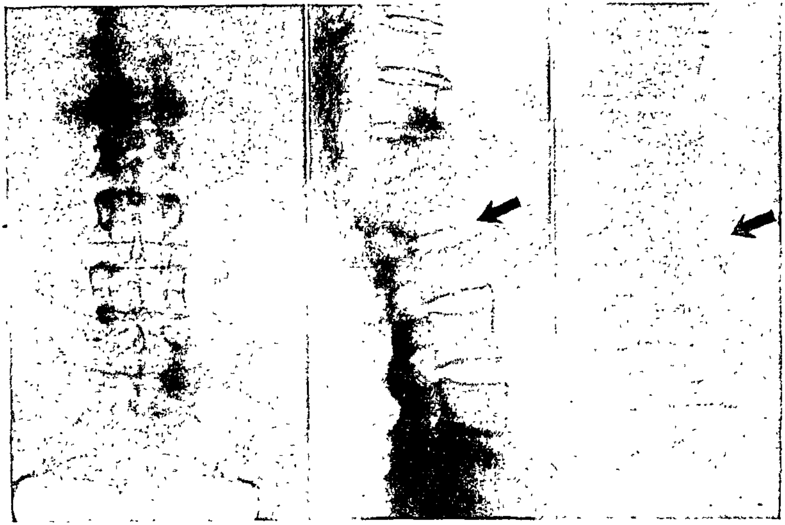
S. O., aged 57, from Sydney, Australia, was operated upon in 1910 for appendicitis with abscess formation. Peritonitis following the operation necessitated another operation. He was unconscious several times and for weeks his condition was grave.

He started feeling pain in his back in 1912, after undergoing an unusual strain (pulling the canvas out of motor tires). After this he had many severe attacks of backache, particularly in 1915. In 1918 he was again operated upon (bilateral inguinal hernia). Between 1925 and 1928 he had many severe attacks of "digging" pain in the back, radiating into the upper and lower abdomen. In 1928 roentgenograms revealed the presence of a stone in the gallbladder. This was deemed to be the cause of the recurring paroxysms of pain in back and abdomen, and his gallbladder was therefore removed. The pain in the back, however, did not cease.

In 1929 he was in an accident, fracturing his left leg and several ribs. No injury of the spinal column was diagnosed at that time. After this accident the pain in his back became more severe and roentgenograms were again made (back and teeth). He was advised to have *four of his teeth removed. Following* their removal he took sodium sulphate fairly constantly; after some dozen injections he felt easier but was by no means cured. The digging pain in his back recurred, sometimes radiating into the upper as well as the lower abdomen, but always emanating from the back.

Though formerly he had had three to four attacks a year, during the last three years he experienced only three or four slight ones. However, on January 6, 1941, he had a particularly bad attack. In the morning of that day he had four paroxysms of digging pain, each lasting half an hour, starting in the back and suddenly shooting down into the center of the abdomen, less markedly into both sides of the lower abdomen. There was no vomiting, nausea, rigidity, tenderness, collapse or temperature. The pulse was normal, but the pain was so intense that an unaccomplished intestinal perforation or a stone of the choledochus had to be taken into consideration, ailments the symptoms of which are often ill defined. After the lapse of some hours there was still pain in the back; none, however, in the abdomen.

The patient said that he had never kept to



Left. Anteroposterior view of the lumbar and lower portion of the thoracic spinal column and pelvis. Moderate osteoporosis. Some osteophytes at the edges of the vertebral bodies in the lower thoracic and upper lumbar spine. *Center.* Lateral view. The physiologic lumbar lordosis is somewhat reduced in its lower portion, the intervertebral disks between the second and the third and between the third and fourth vertebrae are slightly higher than normal. The first lumbar vertebra, also the eleventh and twelfth thoracic vertebrae, deviate from the normal curvature of the spine *and are shifted posteriorly. The twelfth thoracic vertebra is wedge-shaped.* Stripes of denser shadow seem to be present within the intervertebral disks. The backward displacement of the first lumbar vertebra becomes particularly distinct on a comparison of the position of the lower anterior edge of the body of the first with the upper edge of the second lumbar vertebra. The upper and lower surfaces of the twelfth thoracic and the first and second lumbar vertebral bodies show a slightly increased degree of osteosclerosis (moderate osteochondrosis). The osteophytes at the anterior edges of the vertebral bodies develop into arches connecting the tenth with the eleventh and the eleventh with the twelfth thoracic vertebrae, *as well as the twelfth thoracic with the first lumbar vertebrae. There is only slightly developed arching* between the first and second lumbar vertebrae. From the eleventh thoracic vertebra upward the curvature of the spinal column reassumes its normal shape. *Right.* Taken in a semilateral position. Here the small intervertebral joints of the lower part of the lumbar spine are distinctly recognizable and found to be normal. The small joints of the first lumbar vertebra are no longer distinct, while those of the tenth, eleventh and twelfth thoracic vertebrae are not recognizable at all. It is uncertain how the wedge shape of the twelfth thoracic vertebra was brought about. Apparently it was already present before the accident (1929), and may have been *brought about by the unusual strain undergone by the patient in 1912. It is, however, highly probable—and* this view is also favored by the fact that there were changes of the intervertebral disks between the eleventh and twelfth vertebral bodies—that this wedge shape originated in an infectious process (infectious spondylitis) due to severe appendicitis and peritonitis (1910). The twelfth thoracic vertebra and the adjacent intervertebral disks are the places of preference for development of infectious processes of this kind. Pathologic-anatomic as well as roentgen-ray examinations have made it clear that certain features of roentgenograms suggesting an infectious process are no longer recognizable when the process has fully developed. The wedge shape, *therefore, renders the differential diagnosis very difficult where infectious processes or fractures have to be taken* into account and where, moreover, osteoporosis is also present. The administration of sulphate of soda over years is in itself sufficient to produce osteoporosis with decalcification of the bones.

a special diet, but was in the habit of eating everything. Too much whiskey or beer affected his back but not his stomach. He also observed that usually, although not invariably, the pain became worse when in a recumbent position. It became less on walking. He was able to walk for any length of time only if he wore a belt with back support, which he had done for the past ten years.

A thorough examination revealed the following findings: The lungs, the heart, the liver, the kidneys and the blood were absolutely normal; roentgenograms showed that the intestinal tract and the bile ducts were also normal. The physiologic lumbar lordosis was flattened. The upper part of the lumbar spine remained stiff on moving. Forward and backward flexion of the spine was executed very cautiously and was possible only to a limited extent. Turning the spinal column caused pain, as did all movements of its cervical portion.

Pain was most severe and definite in the region of the first lumbar and eleventh and twelfth thoracic vertebrae. This area showed, moreover, tenderness on pressure, though no pain on jolting. There was a hyperesthetic zone over the spinous processes of the eleventh and twelfth thoracic and the first lumbar vertebrae, declining in intensity toward the edges. The long muscles of the back were tender to the touch and taut on both sides, particularly in the area of the lower thoracic and upper lumbar spine. No myogelotic foci were palpable.

In the following discussion roentgenograms taken between January 10 and 17, 1941, are dealt with. Others, previously taken, and produced by the patient, proved to be of no use. The appearance of the vertebral column in these suggested: (1) wedge shape of the twelfth thoracic vertebra; (2) osteoporosis of the spinal column; (3) spondylosis deformans of the thoracic and lumbar spine; (4) arthrosis deformans of the thoracic portion and the first lumbar vertebra; (5) backward displacement of the first lumbar and eleventh and twelfth thoracic vertebrae.

ETIOLOGY

Far too much prominence has been

develops from the places where the anterior longitudinal ligament which connects the anterior surfaces of the vertebral bodies is attached to the bone, and it appears as a consequence of a lesion of the intervertebral disks.

The affection of the small intervertebral joints is also of significance. The arthrosis deformans process found in these joints must be strictly differentiated from spondylosis deformans. The development of arthrosis deformans of the vertebral joints is enhanced by unfavorable static conditions. Mechanical factors are active in its production, and it is found to appear in joints upon which a particular mechanical strain is imposed.

Arthrosis alone is prone to cause pain and to disturb the motility of the spinal column. Arthrotic osteophytes may sometimes protrude to a considerable extent into the intervertebral foramina, in which the spinal ganglia, and the motor and sensory nerve roots are imbedded. This may produce symptoms of pressure or irritation of the nerves or chronic congestion of the blood vessels, which, in turn, has an unfavorable influence on the nerves. No such arthrotic exostoses could be diagnosed in our case.

The most important feature of this case was the backward displacement of the eleventh and twelfth thoracic and particularly the first lumbar vertebrae. This condition may have been produced by a primary affection of the intervertebral disks between the eleventh and twelfth thoracic and the twelfth thoracic and the first lumbar and the first and generation. In this case the trauma was only a secondary factor.

This vertebral displacement is par-
ticularly frequent in that part of the
spinal column where the thoracic por-
tion merges into the lumbar. Schmorl
and Junghanns[5] as well as Guentz[1] found
lorsoventral fissures and tears in the
ntervertebral disks of this region
nterfering with the elasticity of this
tructure. Only tears (running in a
orsoventral direction) which have a
nsiderable length are of significance
this connection, not those frequently
urring fissures which are confined to
immediate environment of the ver-
ral epiphyses, running in cranio-
dal direction and protruding to a
ain extent into the structure of the
ilus. Intervertebral disks which
these dorsoventral tears are par-
rly mobile. The nucleus pulposus
ch intervertebral disks, situated in
enter of this structure, no longer
les a connecting link. Its turgor
able to maintain the tension in the
It is only in the neighborhood of
rtebral arches that a tight con-
between the individual verte-
provided by the arch ligaments.
gh ligamenta flava draw the up-
ocessus articulares downward.
owever, is only possible if the
can at the same time be shifted
ly. If, owing to a torn inter-
disk, the anterior countersup-
iminated (Guentz[1]), the upper
an be drawn backward. Guentz
a number of cases in which
vard displacement was very
ntirely absent; in which, more-
dary changes of the vertebral
not diagnosed and in which
zable changes of the inter-
pace had taken place, al-
intervertebral disk already
ntral fissures and was ab-
bile. In cases of this type

the portion of the spinal column situated immediately above the pathologic area is carried abnormally straight, a fact which is diagnostically of great help. This symptom is frequently encountered in individuals under forty, while backward displacement of vertebrae is more common in older individuals.

AGE FACTOR

No explanation has so far been offered for the singular fact that it is only in individuals over forty that backward displacement takes place. In the following an attempt is made to give a satisfactory explanation: All movements of the spinal column are active in pressing the *loosened* anterior portion of the intervertebral disk forward, this occurrence stimulating the proliferation of bone tissue at the places where the anterior longitudinal ligament is attached to the vertebral bodies. The posterior longitudinal ligament is narrower than the anterior one. In contradistinction to the anterior ligament, the bulk of the posterior is attached to the posterio edges of the intervertebral disks, onl some single fibers running to the pos terior surfaces of the vertebral bodies. This makes it impossible, anatomically, for exostotic formations to be produced in the posterior part of the vertebral bodies, although degenerative changes of the intervertebral disks may be found there. Between the strands of the posterior longitudinal ligament and the posterior surface of the vertebral bodies there is the venous plexus, into which the vertebral veins are admitted. Laterally, the posterior longitudinal ligament merges into a membrane, covering the longitudinal veins of the vertebral canal, which are found on the posterior surface of the vertebral bod them fro pinal cord. According to Schmorl and unghanns,[5] the anterior and posterior igaments counteract each other when ackward or forward flexion of the spine akes place. The posterior longitudinal igament has, moreover, the purpose of rotecting the spinal cord against the ressure of the venous plexus.

Experiments carried out by Victor offmann[2] seem to me of particular imortance in this connection. The proedure was to burden several isolated ertebral bodies of the thoracic and umbar portion. A certain weight invaribly effected tearing of the lowest interertebral disk. It was the posterior ongitudinal ligament which was first uptured, irrespective of whether there vere one or four intervertebral disks eft in the lower part of the spinal colmn. This is, therefore, the point upon hich the greatest strain is imposed. nsequently, should one of the interrtebral disks of this transition zone come subject to degeneration, the organism is able—for some time at least—o make up for the unusual strain imosed on the points where the posterior ongitudinal ligament is attached to the legenerated, worn-out and yielding inervertebral disk, by changing its posure, which gives the impression of a straight posture. It is also shown by the aut musculature that the organism tries o counteract the loosening of the liganental structure by heightened muscuar activity. The older these patients row, the less they are able to provide compensation for the strain imposed n the pathologically changed interverebral disks. It is usually some trivial ccurrence that is blamed as the cause f their disease, but even without such n occasion the posterior longitudinal igament would eventually succumb to he exertion put upon the points of reatest strain. Then, while the verteral bodies approach each other, owing to the slightly oblique position of the intervertebral joints (their axis slanting slightly backward), the upper vertebral body must necessarily be drawn backward.

In cases in which dorsoventral tears of the intervertebral disks are present, we therefore have to differentiate between:

1. Those in which no vertebral displacement takes place, but in which there is more or less pronounced pain in the back, sometimes present for years, also abnormally straight posture of certain portions of the vertebral column.

2. Cases in which vertebrae have been displaced posteriorly. In cases of this type, frequently although not invariably, sclerosis is found in the upper and lower surfaces of the vertebral bodies; or there may be osteochondrosis or the syndrome present in our case, with its history of attacks of pain in the back radiating into the abdomen, recurring over a number of years.

By the backward vertebral displacement the intervertebral foramina are narrowed down in a ventrodorsal direction. The spinal cord with its nerves retains its normal position with reference to the upper vertebrae, which have been shifted backward, while the superior processus articulares of the lower vertebrae project into the foramina intervertebralia, so that the posterior roots are in a much more unfavorable position than the anterior motor roots, which are not at all involved. This may be aggravated by the development of arthrosis deformans in the small intervertebral joints.

The case history given above is very instructive, providing evidence of the high degree of probability that a mistaken diagnosis will be made in cases of this type. In our patient this led to the removal of his gallbladder and to the daily administration of sodium sulphate over a period of several years, this in its turn provoking decalcification of the osseous system.

THERAPY

The treatment of backward vertebral displacement is the same as that recommended in arthrosis deformans. The patient should be advised to avoid any unusual strain of the spinal column. Easy occupation may keep the patient fit to work for years, while heavy work would incapacitate him for long periods. Hot fomentations have proved useful, as have antiphlogistic treatment and skillful massage of the long muscles of the back. We think it of prime importance that the patient wear a well-fitting belt with back support for the lower part of the spinal column, the only means of relief from pain.

SUMMARY

A case history of the backward displacement of thoracic and lumbar vertebrae is given. The exciting cause of backward displacement is seen in dorsoventral tears and fissures of the intervertebral disk situated below the shifted vertebrae, which causes loosening of the structure of the disk. Attention is directed to the prominent part played by the posterior longitudinal ligament, the participation of which has not been given much consideration up to the present. It is not until this ligament yields to pressure that a vertebrae can be drawn backwards.

Therapeutic measures are the same as those recommended in the treatment of arthrosis deformans.

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RÉSUMÉ

Déplacement postérieur des vertèbres thoraciques et lombaires

L'histoire d'un cas de déplacement postérieur des vertèbres thoraciques et lombaires est décrite. Comme cause excitante le déplacement postérieur déchirures et fissures dorsoventrales du disque intervertébral placé audessous de la vertèbre déplacée son considerées; ça cause relâchement de la structure du disque. Particulière attention est placée sur la part prominente jouée par le ligament longitudinal postérieur, dont la participation n'a pas été prise beaucoup en considération jusqu'à maintenant. Seulement lorsque ce ligament cède à la pression, la vertèbre peut être déplacée postérieurement.

Les mesures thérapeutiques sont les mêmes de celles recommandées dans l'artrose déformante.

SUMARIO

La luxación posterior de las vértebras torácicas y lumbares

Se relata una historia clínica de la luxación posterior de las vértebras torácicas y lumbares. La causa determinante de la luxación posterior se presenta en las desgarraduras dorsoventrales y en las fisuras del disco intervertebral situado debajo de la vértebra desviada que causa el aflojamiento de la estructura del disco. Se hace incapié en el papel importante que juega el ligamento posterior longitudinal, cuya participación hasta la fecha no se le ha dado mucha importancia. No se puede luxar la vértebra sino hasta que el ligamento cede a la presión. Las medidas terapéuticas son las mismas que se recomiendan en la artrosis deformante.

Автор опи
ного и лумба
вывиха ока

ывы и трещины междупозвоночного диска. Важную роль в вывихе играет задняя родольная связка. Позвонок может только тогда подвинуться, когда эта связка поддается давлению. Лечение тоже, что и при деформирующем артрозе.

Congenital Absence of Vagina: Choice of Operative Procedure

ELISABETH ESSER, M.D.

MONACO

CONGENITAL absence of vagina generally coexists with more or less complete uterine aplasia. :herefore it is only in exceptional cases, ı which the uterus is normally devel- ped, that the creation of a new vagina ;ill make conception and delivery pos- le.*

n general, one can hope only to give e woman an organ which will allow ormal sexual intercourse, which, nevertheless, may present important moral onsequences that are not to be over- oked.

We will try in this article to make a hoice between the different procedures sed until now, comparing them from he point of view of: (1) their danger; 2) their functional results; (3) their echnical complexity.

The technic of creating a large hollow etween the rectum and the urethra and ladder, is the same in the different iethods. Covering the inner surface of he cavity by epithelium will make pos- ible establishment of: (1) transplanta- ion of the small intestine; (2) trans- lantation of the rectum; (3) pedicled aps; (4) free skin grafts.

The Baldwin procedure consists of ransplantation of a segment of small intestine that continues to obtain its nourishment through a mesenteric pedicle. After creating a hollow between the rectum and bladder from the peritoneum, Baldwin performs a median laparotomy; he then selects a segment of the small intestine, situated at least 12 inches from the cecum, 8 inches in length, with enough mesentery to let it down to the vulva without traction. Both ends of the chosen segment are sectioned and an anastomosis made in front of the mesentery, in order to reestablish the continuity of the ileum. Both ends of the excluded segment of intestine are then closed. The peritoneum is opened and with a large forceps inserted through the peritoneal wound, the segment is grasped at the union of the middle and the lower third, and drawn into the vulva. The peritoneum is sutured around the mesenteric pedicle. Finally the intestine is opened at the peritoneum and the edges of the aperture are sutured to the edges of the wound of the vulva.

This operation requires a long time, and is often attended by shock. If the intestine cannot be extended down into the vulva, it will be impossible to continue the operation. Later on, peritonitis may occur when sutures are freed or sloughing appears on the intestine. An intestinal occlusion by strangulation is always possible.

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*Cases of Dolbeau, 1874, Fletcher, Wagner.

The walls of the new vagina are generally supple and wet, and the functional result is not always perfect. Intestinal colic, hypersecretion or a scar making the introitus too narrow and requiring later corrections may be necessary.

Due to an average mortality of 25 per cent we do not advise the use of the Baldwin method.

Transplantation of the rectum, first described by Sneguireff (1892), has been greatly modified by Schubert, who made an extensive study and wide application of the method. The usual space between the bladder and the rectum is created first, then dissecting the anal mucosa inside the sphincter, the edge of the mucosa is pulled into the new introitus vaginae and sutured to the edges of the wound of the vulva. Next, a parasacral incision is made and after ablation of the coccyx the upper part of the rectum is dissected, passing inside the fibrosa. The rectum is drawn out from the sacral wound and cut through about four inches from the vulva. The upper extremity of the new vagina is sutured and fixed at the superior sacrosciatic ligament. The end of the rectum is pulled down through the sphincter and sutured at the edge of the skin around the anus. Gauze drainage is inserted into the sacral wound.

This operation is long and delicate and each detail must be scrupulously observed. Those desiring to try this operation should follow exactly the technic described by Schubert. Care must be taken during the operation not to wound bladder, rectum, ureters or peritoneum. Continuous suppurations, stercoral fistulae and prolonged anal incontinence frequently occur. The mortality, however, seems slight, one patient died in 32 patients operated on by Schubert.

Those who have used this method have found excellent functional results. We think, therefore, that this procedure should not be entirely discarded, but reserved for surgeons who have long experience in surgery of the rectum through the sacral region.

PEDICLED FLAPS

Plastic operations using pedicled flaps are of two kinds: those using flaps from the vulva and those taking large flaps from the thighs.

The first is the method of Pozzi, which, using small and large lips, gives a vagina that is too short.

The second type of operation has been much used in America. Grad advises use of a large flap on the thigh, with its pedicle near the future introitus vaginae, turned back into the hollow created between bladder and rectum. As the required flap is of very large dimensions (7 x 5 in.), transplantation is delayed (four times in the method described by Grad), in order to avoid its necrosis.

Frank and Geist make a large tubal flap of the thigh, obtained by two parallel incisions of 8 in., 3 in. apart, and sutured by its edges to form a tube. The transplantation requires a four-stage operation.

These different methods all require several operations, which is inconvenient for the patient as they require treatment lasting for months. Moreover, because of the character of the transplanted skin which is white and thick, very different from the mucosa, and because of the sclerous retraction of the new vagina and the risk of necrosis of the flaps and because of the size of the scar on the thigh, we do not consider this method ideal in creating a new vagina, however harmless it may be.

FREE GRAFTS

We merely mention the procedures of

sing amniotic membranes (Brindeau), ernix caseosa (Kleitsman), heteroplasic grafts, etc., which have been used inrequently with partial success, but were ot reported long enough after operaion.

Study of a sufficient number of operaions making use of Thiersch grafts, owever, convinces us that this proceure is perfectly harmless and gives ood results. It is a one-stage operaion, there is no operative shock, the rafting is nearly always successful, ven if at first sight the graft does not eem to have taken on the whole surface. The vagina obtained by this method has upple walls, better than in other methds using skin.

The method was first described by Robert Abbe in 1892. It is an applicaion of the epithelial inlay extensively sed and minutely described by J. F. S. Esser.[1,2,3]

An incision, either transverse, T-shaped or circular, is made on the vulva, t the same distance from the external rifice of the urethra and anus. Starting from this aperture, an incision is made between urethra and bladder on ne side, and the rectum on the other. First passing through loose tissues, then between the adductori ani the incision is continued into the peritoneum. Hemostasis is generally done by stents, which are retained during the time of preparation of the graft.

Before starting the operation, a mold for the graft is prepared. Stent's dental compound is preferable to sponge or other materials. The mold has the general shape of a cylinder, slightly flattened, 6 in. long, 2 in. wide, 1¾ in. thick. These measures may change with the size of the patient, but one must remember that the artificial vagina must be made larger than the final result desired, as some shrinking always occurs.

A dermo-epidermic graft is taken with a Thiersch knife from the anterior surface of the thigh, as large as possible, approximately 12 in. long and 3½ in. wide, and delicately applied on the mold, with its raw surface outside. If necessary, several smaller grafts may be placed on the mold, overlapped like tiles on a roof.

The mold covered by the grafts is carefully introduced into the hollow which has been previously created between bladder and rectum, fixed there by stitching the edges of the vulvular orifice together. Light dressing is applied, and a catheter inserted in the urethra.

On the tenth day the mold is removed and the cavity washed with tepid serum. The stent mold or a dilatator is put back and taken out every two days for irrigation of the cavity with tepid serum.

The epithelization is generally completed about the twentieth day, but we advise continuance of the dilatation of the new vagina and the wearing of a prosthesis by night for some time.*

This operation of extraordinary simplicity and entire harmlessness (local anesthesia may be used) gives satisfactory results. If abundant and odorous secretion should appear shortly after the operation, there is no reason for alarm or removal of the mold.

The graft may taken on the whole surface, or on the tenth day there may be white islands of epithelium on a red surface where the grafts do not adhere. The epithelization, however, will start at the edges of these islands and unite, giving an entirely epithelialized cavity after some time.

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* The perineal wound, the site of the new vagina, must fit snugly to the mold, so that no bleeding or secretion accumulates between the flap and wound.

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SOMARIO

En este artículo el autor evalua los diferentes procedimientos quirúrgicos para crear una vajina artificial en casos de ausencia congenita de este órgano, y describe en detalle el método de Esser.

SOMMAIRE

L'auteur évalue les différents procédes qui ont été employés pour la création d'un vagin artificiel dans les cas d'absence congenitale du vagin et il décrit le procédé dont il se sert el qu'il recommande.

Выводы

Автор описывает разныя *операции* для образования *исскуственного* влагалища в случаях конгенитального отсутствия его и описывает его-*же* методу.

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Editorial

Max Neuberger, Master Medical Historian, Celebrates 75th Anniversary

MAX Neuberger, M.D., Ph.D., Dean of Medical History, will be 75 years old on December 8, 1943. was formerly professor of the His- of Medicine at the University of ienna. Since 1939 he has been associted with the Wellcome Historical Med- al Museum in London, England.

He has contributed to his specialty as teacher, author of medical history, nd founder of the Institute for Medical listory and Museum at the University f Vienna.

His most important work is the *His- ory of Medicine* (1906-1910), which is emarkable for its originality, philoophic basis, depth of thought and facual accuracy. This work, considered a lassic, is a standard text, to which hisorians and authors the world over have nade numerous references.

The *Handbuch zur Geschichte der Iedizin* is another important contribuion, made in conjunction with Pagel. t is the largest and most complete sysem of the history of medicine published. lso deserving of mention are: "The listory of Antitoxic Therapy" (1901); 'Theories on the Mechanism of Specific

To my dear friend Doctor Rob. Rosenthal

1942.

Prof. Max Neuberger.

Nutrition" (1900); "Medicine in Flavius Josephus" (1919) and "The Healing Power of Nature" (1926).

In addition, Prof. Neuberger has enriched practically every phase of the history of medicine from ancient to modern times, investigating and evaluating *the history of various specialties* or diseases of various organs, scrutinizing the history of the numerous phases of the medical activities and medical teaching, as well as the relation of various countries and outstanding men to the Vienna School of Medicine.

Aside from being a great historian, Neuberger was an excellent teacher. He attracted pupils from all over the world, and he was held in highest esteem by medico-historians in every country. Honors were accorded him from many scientific societies, in the form of honorary or corresponding membership. The Austrian Republic finally recognized his merits and his contribution to the University of Austria and bestowed upon him the highest order of the Republic. Through his Swedenborg researches in earlier years, he was highly acclaimed in the Scandinavian countries. But as the so-called ideological change of Germany began to take root in Austria, he was pensioned before he reached the age limit, and was retained by the government as curator (!) of the museum and library which he had created with his own books and collections and built up to an enviable height.

There were several periods in his life when he seemed to have lost courage and confidence in the future. Garrison saw him in the post-war period following the first World War; at that time Neuberger's spirits were at a low ebb as far as his professional enthusiasm was concerned. He was pauperized by the general economic conditions and was treated shabbily by many colleagues, partly due to negligence, partly due to jealousy. When the first International Congress of the History of Medicine was held, the beginnings of Arian chauvinism were noticeable.

Another heavy blow — perhaps the heaviest—was the sudden loss of his beloved wife, which undermined his scientific enthusiasm as well as his health. But he pulled himself out of this depression and continued his work.

In September, 1935, he attended the tenth International Congress of Medical History in Madrid as delegate of the University of Vienna and the medical faculty. In Spain he received the degree *Honoris causa* at the University of Alcalá, and in 1939 he was elected an honorary member of the Royal Society of Medicine of England.

Neuberger is now acclaimed Dean of Medical History by medico-historians the world over — except the Nazi-controlled group—and even they admired him when they were allowed to give honor where honor was due.

Garrison referred to Neuberger's *History of Medicine* as "superlative" and "unquestionably the best modern work." Garrison continues: "As an historian Neuberger is eloquent, profound, absolutely sincere, and a good stylist. As a scholar he is richer, deeper, and more serious than Baas . . . Yet he has no saving salt of humor and often exhibits the Germanic tendency to rhapsodize . . ."

In 1928 the medico-historians from all over the world honored him on his 60th birthday with a *Festchrift*, a volume containing fifty medico-historical contributions. The motto, "*Vir integer sclerisque purus*," brings out Neuberger's most outstanding qualities, his sincerity, which was one of the main impressions he made on Garrison, and his scientific honesty. E. F[illegible] Neuberger'[illegible] ri[illegible]nd c[illegible] comn[illegible] ıe introduction to this volume with: To celebrate Neuberger means to greet ratefully a rare person and a great ork . . .,'' and further on, ''The conecting of the history of medicine with eneral cultural history and the genetic epresentation of medical problems will lways be tied up with the personality f Neuberger.'' For this same celebra- on the Neuberger medal was struck, a hotograph of which is used as frontis- iece of the *Festschrift.*

Another volume honoring him is Essays in the History of Medicine,'' anslated by various men, edited and refaced by Fielding H. Garrison 1930). It contains many of Neuberger's nportant articles.

A celebration was planned again in 38 for his 70th birthday, which came to naught due to the political changes in Europe.

As a teacher Neuberger was beloved by his pupils, associates and friends. His devotion to the subject inspired them and aroused them to interest in research. His pupils are now teachers of medical history in many countries.

Neuberger, dean of contemporary medico-historians, ideal teacher, investigator and author, whose works have been translated into several languages, and have enriched medical literature, is not Vienna's teacher, but the world's. Justly the medical profession the world over is now celebrating the seventy-fifth birthday of Neuberger, the master medical historian.

S. R. Kagan, M.D.

ACKNOWLEDGMENTS

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(Continued, page XIII)

CHAPTER ACTIVITIES

ARGENTINA

DR. ALEJANDRO CEBALLOS

Alejandro Ceballos, M.D., F.A.C.S., F.I.C.S., Vice-president International College of Surgeons.

DR. Alejandro Ceballos was recently elected Vice-president at the Fourth International Assembly of the International College of Surgeons.

This distinguished surgeon graduated with a diploma of honor from the Faculty of Medical Sciences of Buenos Aires in 1910. In 1924 he received the decoration of Knighthood in the Civil Order of Alfonso XII during the Spanish-American Medical Congress meeting in Seville, Spain. In 1934 he was honored for the excellent book which he published on *Hemorrhagic Thrombocytopenic Purpura* in collaboration with Dr. Hermann Taubenschlag, and in 1936 he received honorable mention for his book on *Chronic Pulmonary Suppurations*.

Dr. Ceballos is an honorary member of the Brazilian College of Surgeons, a corresponding member of the Royal National Academy of Medicine of Madrid, a member of the American College of Surgeons, a corresponding member of the National Academy of Medicine of Rio de Janeiro, of the Surgical Society of Montevideo, of the Medical and Surgical Society of Rio de Janeiro and a corresponding fellow of the Medical and Surgical Society of São Paulo, as well as being a member of the Surgical Society of Buenos Aires.

Dr. Ceballos has been a delegate from Buenos Aires to various national and international surgical gatherings. He has been president of the Surgical Society of Buenos Aires, and in 1936 presided over the Eighth Argentinian Congress of Surgery. In 1938 Dr. Ceballos was president of the local Committee of Organization of Buenos Aires for the Sixth National Medical Congress held in Córdoba.

Professorships held by Dr. Ceballos include the following medical institutions: Faculty of Medical Sciences of Buenos Aires; Medi [illegible] of La Plata; Institute of [illegible] c Buenos Aires.

We welcome th

geon into the official family of the International College of Surgeons. His enthusiasm and keen desire for the advancement of surgery augurs well for the accomplishment of our ideals and chapter activities.

MEXICO

DR. VICTOR FERNÁNDEZ MANERO, CHIEF OF THE DEPARTMENT OF HEALTH OF THE UNITED STATES OF MEXICO RECEIVES THE DISTINCTION OF FELLOW (HONORIS CAUSA) OF THE INTERNATIONAL COLLEGE OF SURGEONS

THE International Board of Trustees of the International College of Surgeons has conferred the degree of Fellow (Honoris Causa) on Dr. Victor Fernández Manero, Chief of the Department of Public Health of the United States of Mexico in recognition of his outstanding contributions to science and his devoted participation in organizing the Third International Assembly of the International College of Surgeons, which was held in Mexico City at the invitation of the Mexican government. The ceremony took place in Mexico City on last February 27 in the office of the Chief of the Department of Public Health in the presence of a number of distinguished colleagues.

Presentation of the diploma and insignia of Fellow (Honoris Causa) to Dr. Victor Fernández Manero, Chief of the Department of Public Health of Mexico. Vice-president Manuel Manzanilla is reading the citation.

Vice-president Manuel A. Manzanilla conferred the insignia and diploma on Dr. Manero after reading the following citation:

Dr. Victor Fernández Manero:

On this occasion, while unleashed furies rage against the peace and happiness of peoples, so that ruin threatens the significant Utopia of Lawrence, that this century would be that of the humanization of man, we come to you as a representative group of friends, embellished by the beloved presence of teachers, chosen because of their wisdom and virtue. I am here, for my part, presiding over such a learned company only by merit of duty, which affords me again the privilege of attesting a deep regard for justice.

You, then, accepting the generous recommendation of the President of the Republic, added your resolution and enthusiasm to the illustrious work of the Chief of State and with steadfastness and energy you have obtained fine results from consistent efforts and singleness of purpose. Thus, one could cite as outstanding among your numerous activities as Chief of the Department of Public Health that which marks with the insignia of the special cross a historical milepost for our country, the campaign against tuberculosis. Centuries after Guido de Montpellier carried from Provençal, the land of knights and poets, the precious symbol toward Rome to ennoble the shield of the venerable Hospital of the Holy Ghost, you have crowned a great work with this same cross, which under the clear sky of Mexico is an augury and promise of resurrection and good will.

And thus you have continued, tracing lofty paths in all the aspects of sanitary service as a light which shines in the darkness; the battle against treacherous cancer, the dreadful oncocercosis, devastating malaria, childhood scourges, etc. You have led an obstinate fight in all ranks, by all means, to convert a tenacious past of grief and sadness into a better life, modifying wornout structures of economic and social organization and redeeming for the Fatherland an abundance of lost health, which is force and might in the destiny of peoples.

One day, again, accepting the generous recommendation of the President of the Republic, you added your zeal to the presidential task of watching over the culture of Mexico, the first in time in America, and no scanty effort and labor, in the first attempt to gather in the capital of the country the Third Assembly of the International College of Surgeons at the invitation of the Mexican Government. This was a transcendent event in the history of the Nation, a reminder of our tradition of former greatness, and you were responsible in part for its unprecedented success.

In view of the aforementioned facts, the International College of Surgeons, by the unanimous agreement of its International Executive Council, has voted you a Fellow Honoris Causa, a sincere recognition and cordial distinction which, in my capacity as International Vice-president of the College, I have the honor to communicate to you at the same time as I enjoy the satisfaction of placing on your breast the insignia of this distinguished organization and handing you the corresponding diploma. Welcome, Dr. Fernández Manero, to the body of the International College of Surgeons.

Dr. Fernández Manero, profoundly moved, gave thanks for the distinction just conferred upon him, stating that he values it the highest honor of his life.

The award given, Dr. Fernández Manero informed those present that the President of the Republic had appointed a Mexican delegation to the Fourth International Assembly of the International College c
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at the Assembly

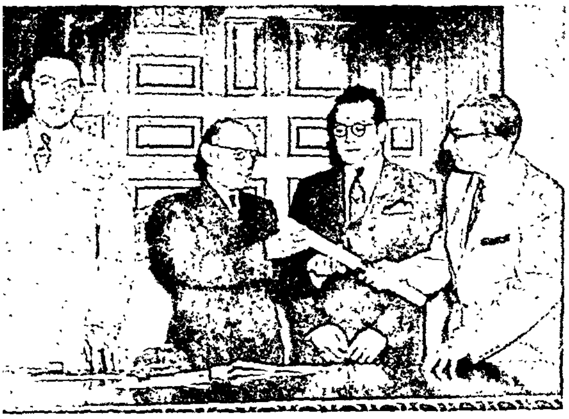
n Delegation then being presided over y Dr. Manuel A. Manzanilla.

Later on, the colleagues present at the eremony visited the Clinic for the emloyees of the Department of Public Health, built at the initiative of Dr. Fernández Manero, and finally entertained at a luncheon for the Chief of the Department of Public Health of the United States of Mexico.

DR. GONZALO CASTAÑEDA HONORED

ON the occasion of the fiftieth anniversary since his graduation in medicine Dr. Gonzalo Castañeda, I.C.S. (Hon.), President of the Mexan Chapter of the International Colege of Surgeons and National Regent, eceived the well-earned homage of is students, fellow-surgeons, and coleagues. The Mexican Chapter of the nternational College of Surgeons aranged for an extraordinary session on he 10th of July in the *Salon de Actos* of he Faculty of Medicine of the National niversity of Mexico.

The invitations for this auspicious ocasion were sent out by Dr. Darío Ferández Fierro, F.I.C.S. (Hon.), Viceresident of the Mexican Chapter of the nternational College of Surgeons, and r. Francisco Fonseca García, F.I.C.S. (Hon.), National Secretary of this organization.



Dr. Gonzalo Castañeda receiving scroll commemorating the fiftieth anniversary of his graduation in medicine. Left to right: Drs. Samuel Ramírez Moreno, Dr. Gonzalo Castañeda, Gustavo Argil, Manuel A. Manzanilla.

Dr. Samuel Ramírez Moreno contemplating commemorative scroll with Dr. Gonzalo Castañeda.

The function was solemn and inspiring. It was opened by an address by Dr. Gustavo Argil, F.I.C.S. (*Honoris Causa*), Director of the Faculty of Medicine of Mexico. Inspiring addresses by Drs. Victor Fernández Manero, Chief of the Department of Health of the Mexican Republic, and Dr. Manuel Márquez R., Dean of the Faculty of Medicine of Madrid, followed.

A commemorative scroll was presented to Dr. Castañeda, the beloved teacher and eminent surgeon. The affair was one of brilliant solemnity.

PERU

DR. FRANCISCO GRAÑA INTERVIEWED ABOUT FOURTH INTERNATIONAL ASSEMBLY

Dr. Gonzalo Castañeda reading discourse. On his right: Dr. Samuel Ramírez Moreno, Secretary General of the National University of Mexico, and Dr. Fernández Fierro, Vice-president of the Mexican Chapter of the International College of Surgeons; on his left: Dr. Gustavo Argil, Director of the Faculty of Medicine of the University, and Dr. Manuel Manzanilla, International Vice-president of the International College of Surgeons.

IMMEDIATELY upon his return to Lima, our First Vice-president and President of the Peruvian Chapter of the College, Prof. Dr. Francisco Graña, was interviewed by the press anent the activities of the Fourth International Assembly of the International College of Surgeons held in New York, June 14-16, 1943. He enthusiastically pointed out the eager and successful dissemination of the latest achievements of war surgery, as well as the progress made by the International College of Surgeons as an international medium for exchange and diffusion of surgical accomplishments. He spoke glowingly of the excellent organizational facilities of the City of New York.

Dr. Graña delivered an address at the Workman's Hospital, his subject being the Fourth International Assembly and the activities of the International College of Surgeons. He will also address the Peruvian Academy of Surgery, of which he is president. He was very laudatory of the impression the Assembly created on the Peruvian delegation. His sentiments were especially warm when he mentioned the enthusiasm of Dr. Cesar Héraud for the International College of Surgeons.

BRAZIL

INSTALLATION OF THE BRAZILIAN CHAPTER OF THE INTERNATIONAL COLLEGE OF SURGEONS IN RIO DE JANEIRO

THE Brazilian Chapter of the International College of Surgeons, with headquarters in Rio de Janeiro, was founded on April 21, 1942. However, its formal installation was postponed until the arrival in Brazil of Dr. Fred Albee, International President of the International College of Surgeons. The ceremonies of installation occurred on June 19, 1942 at 8:30 P.M. in the salons of the Municipal Council, kindly made available for this occasion by Dr. Jesuino [illegible] uerque [illegible]

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posed of Founder-Fellows present at the first official meeting, National Regents, Specialty Regents, State Regents, Fellows, Members and Associate Members. The National Regents constitute the organizing and governing body of all the national activities, just as the State Regents will be the official representatives of the states. Its first list of officers follows:

- President:
  - Dr. Osvaldo Pinheiro de Campos
- Vice-Presidents:
  - Dr. Estelita Lins
  - Dr. Jorge Morais Grey
  - Dr. Dagmar Chaves
- Secretaries:
  - Dr. João da Costa Monteiro
  - Dr. Domingos Guilherme da Costa
- Treasurer:
  - Dr. José Cortes

The post of honorary president was also created and offered to the distinguished Brazilian surgeon, Dr. Jorge Gouvêa, as a special distinction based on his outstanding merits and recognized competence.

U.S.S.R.

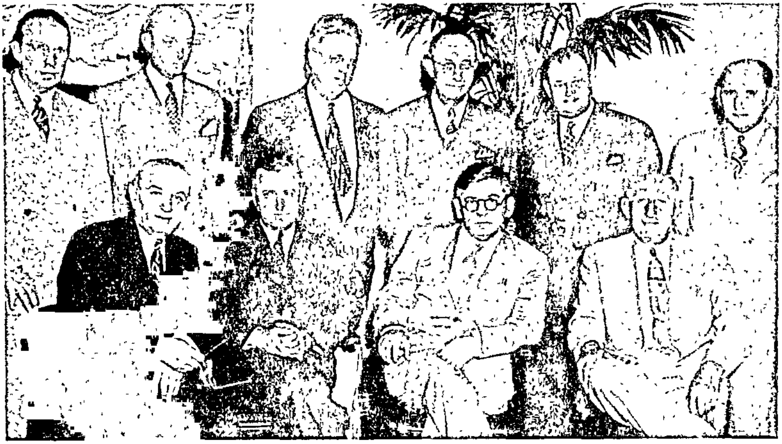
PROF. VLADIMIR V. LEBEDENKO VISITS CHICAGO

Prof. Vladimir V. Lebedenko

PROF. Vladimir V. Lebedenko, professor of Surgery at the First Moscow Medical Institute, a representative of the Russian Red Cross and Red Crescent and member of the Board of Trustees of the International College of Surgeons, visited Chicago under the auspices of the Chicago Committee of Russian War Relief, Inc. On Friday, August 13, Prof. Lebedenko was met at the train by a reception committee consisting of a representative of the mayor's office, Dr. Morris Fishbein of the American Medical Association, Mr. Joseph M. Cudahy, representing the American Red Cross, Dr. Benjamin F. Miller representing the Chicago Committee of Russian War Relief, Inc., and others.

In the evening a dinner was tendered Prof. Lebedenko by the Chicago Council for American-Soviet Friendship and on Saturday, August 14, a luncheon was held at the office of the Chicago Committee of Russian War Relief, and in the evening Prof. Lebedenko was a guest at Ravinia.

On Monday, August 16, a visit was arranged to the headquarters of the American Red Cross, and on Tuesday, August 17, a visit to the University of Chicago and Billings Clinic. At noon a



Reception Committee of Chicago Fellows of the International College of Surgeons during the visit of Prof. Lebedenko to Chicago. Standing from left to right: Drs. Chester W. Trowbridge, Edmund G. Brust, Horace Turner, E. W. Fischmann, Michael Badzmierowski, Richard Lawler. Seated: Drs. Max Thorek, Karl Meyer, Prof. Vladimir V. Lebedenko, Dr Alfred Strauss.

12:30 luncheon was served to members of the medical profession at the Palmer House. Dr. Dallas B. Phemister, Chairman of the Chicago Committee of Russian War Relief, presided. At 4:00 P.M. Prof. Lebedenko visited Rush Medical Clinic and in the evening was a guest at dinner at Mt. Sinai Hospital.

The Chicago Committee of Fellows of the International College of Surgeons consisted of: Drs. Chester W. Trowbridge, Horace Turner, Edmund G. Brust, E. W. Fischmann, Michael Badzmierowski, Richard Lawler, Max Thorek, Karl Meyer, and Alfred Strauss.

On Monday, August 16, a visit was arranged for Professor Lebedenko at Cook County Hospital. He was shown the facilities of the great institution by Gen. Manus McCloskey, its superintendent, and Dr. Michael Koenig.

In the evening a dinner was tendered Prof. Lebedenko in the French Room of the Blackstone Hotel. Dr. Thorek acted as toastmaster.

Dr. Karl A. Meyer of the University of Illinois, Senior Regent for Illinois of the International College of Surgeons, pointed out the great benefits to be derived from social and scientific intercourse between various nations. He spoke glowingly of the future of surgery and the wholesome relationships created by the International College of Surgeons with other scientific organizations throughout the civilized world.

Dr. Alfred Strauss, Chairman of the Board of Governors for Illinois of the International College of Surgeons, stated that comparatively little is known to us at present about the great contributions of Russia to the advancement of surgery, but after this blood bath and holocaust is over, an exchange of scientific thought and activities is bound to redound to the advantage of surgical endeavor of the [illegible]. Dr. Strauss referred [illegible] remarks that the U[illegible] Russia have a great

Together they comprise one-sixth of the world's area. The outstanding feature of both countries is "intestinal fortitude," and in the present action the struggle between Germany and Russia may be compared to a great football game (Dr. Strauss is an ardent football enthusiast). He stated that the Germans made the 5-yard line and were thrown back by the Russians with a score of 80-0 in favor of the Russians. He then analyzed the world situation in a very entertaining and illuminating manner, and he stressed the mission of the International College of Surgeons in the post-war world.

Addresses were made by other Illinois members of the College, followed by Prof. Lebedenko's inspirational words as translated by Dr. George Halperin of the American Medical Association, which follow:

"It is not the first time," said Prof. Lebedenko, "that I have been called upon to speak to American physicians in the name of the physicians of the Soviet Union. Each time I feel a natural nervousness, not because I am speaking before a new audience, that is understood, but because upon me rests a moral responsibility in bringing to the physicians of the United States the message of our colleagues from the U.S.S.R.

"In every endeavor the difficult moment is that moment when one feels that one is uncertain. My happiness lies in the fact that I know whom I represent, that in speaking to you here in America, I am fulfilling the obligations entrusted to me by the physicians of my country. I am fulfilling their most urgent wish—to foster and to solidify the cultural bonds that unite our two great nations, the U.S.S.R. and the United States.

"Here in your country I have found people who keenly realize the importance of this cultural bond. Through them I see that my work is not difficult, that they consider it their task as well as mine, and I am certain that a firm mutual understanding is not far away.

"Not long ago I received a letter from a group of physicians in the front lines. Briefly, they write as follows: 'We are all working to destroy our hated enemy. We want to assure you that your work during these historic days of terrible battles will hasten that destruction. We write from the front lines of those battles to ask you to tell our American colleagues that the hour of Hitler's doom is near. Tell them that everything that is required of us here in the Soviet Union, we will fulfil. We send you greetings. We hope you are well and that you have strength to fulfil your mission, that of fostering and nourishing our friendship with our great ally, the United States of America.'

"I bring you greetings from the Soviet physicians and tell you in their own words of their hopes and desires. I bring you greetings from friends, who send their greetings to friends.

"Permit me to thank you for your hospitality in their name, the name of the surgeons of the Soviet Union, and to wish you all success in the path you have chosen, to create a bridge of cultural unity and understanding between our two nations. I know that not only will you help to bring the surgeons of our countries closer, but that you will succeed. I am happy to be able to say to you that in me you will always find a friend to aid in that work. I am happy because it is clear that a glorious future must replace the tragic present and that light will follow this darkness. If I have helped to bring that future one moment nearer, I shall have had the deepest moral satisfaction that it is given to me to experience as a man and as a physician."

On Wednesday, August 18, Prof. Lebedenko was the guest of the Detroit Chapter of the American Red Cross. In the evening he was guest of honor at a meeting in the W.W.J. Auditorium at which the American-Soviet Medical Society was launched. While in Detroit Prof. Lebedenko met with Warren B. Cooksey, head of the Michigan Blood

Bank, and representatives of other medical societies to further the new organization for facilitating exchange of medical information between the United States and the U.S.S.R.

MAJOR BENVENUTO R. DIÑO HONORED

A DINNER was tendered Dr. Benvenuto R. Diño, surgeon to His Excellency President Manuel Quezon of the Philippines, upon the occasion of his becoming a Fellow of the International College of Surgeons. The dinner was sponsored by the Filipino Community Center of Chicago and the Fellows of the International College of Surgeons of the Illinois-Wisconsin region. It was a brilliant affair.

President Manuel L. Quezon sent the following message:

"My warmest greetings to the International College of Surgeons and the Filipino Community in Chicago. When you honor Dr. Diño by admitting him to your society tonight, you honor not only a Filipino doctor, but also his country. The medical profession in the Philippines has given to our nation some of her most distinguished citizens. Our national hero, José Rizal, was a physician and surgeon. Through our medical scientists the Philippines have maintained close relations with all important scientific organizations of the world, and they have thus been instrumental in fostering friendship and cooperation between peoples of different races and creeds. It is, therefore, with profound gratification that I learned of Dr. Diño's admission to your society. I see in this not only recognition of another surgeon by a group of surgeons, but also a hearty welcome extended to a stranger by an organized body of men of good will and understanding. It is my earnest hope that the model of international brotherhood and service to humanity so well exemplified by your organization will be more widely copied by all men in all walks of life."

A message from Dr. Morris Fishbein also was read:

"Please convey to Major Benvenuto Diño my congratulations on the recognition ten-

Reception Committee of Illinois Fellows. *Standing left to right: Drs.* Walter J. Reich, Walter C. Burket, Edmund G. Brust, Lawrence L. Iseman, Michael J. Badzmierowski, Horace E. Turner, Egon W. Fischmann, Edward W. Marquardt. *Front row, seated, left to right:* Jacob P. Greenhill, M[illegible] Di[illegible] Major Benvenuto R. Diño, Alfred A. Strauss, Max Thorek.

Wisconsin regents attending dinner tendered Major Diño. Left to right: Drs. Samuel G. Higgins, Karl F. Schlaepfer, Wm. J. Carson, Lemuel D. Smith.

dered to him by the International College of Surgeons. He has done much to aid understanding and friendship necessary in the post-war world among peoples of all races and creeds if world peace is ever to become a reality."

Addresses were made by Dr. Alfred A. Strauss, Dr. Hicaro and others.

Major Diño's remarks follow:

"Everything that has been said and done this evening has touched my heart beyond comparison. I appreciate more than I can say this beautiful gesture of your generosity and your hospitality. I feel I don't deserve it. *I do feel, however, that this is another happy* evidence of your recognition of the gallant stand taken by the Filipino people, soldiers and civilians alike, in fighting side by side with our American friends and the United States to preserve the dignity and happiness of the freedom of men.

"It was the fortune of war that brought Americans to the shores of my native land. At that time the Philippines were on the verge of overthrowing the dominion of Spain. Then Commodore Dewey silenced the guns of the Spanish-Americans in Manila Bay. Filipino soldiers, aided by civilians, succeeded in capturing Manila.

"This was the first time Americans and Filipinos became partners in blood and the struggle against tyranny. It was naturally hard for my people to realize the aims for which Americans went to the Philippines; the Philippines which had suffered long enough from the oppression of a foreign ruler. And while we evidenced profound opposition to anyone reaching our shores, you convinced us that you did not come to my country as rulers or oppressors; you came as educators, liberators, and friends.

"Ever since that time we were convinced that we should keep faith with you. You established civil government in the Philippines. The first proclamation of the first American governor contained these words so highly *prized by us: 'The Philippines for the Filipinos.'* These words were spoken time and again by Presidents of the United States—by McKinley, Theodore Roosevelt, and by the great Wilson, who in 1916 signed the Jones Law and granted to the Filipinos a majority on the Philippine Commission. This was reaffirmed in 1934 by the Tydings-McDuffie Act, granting us absolute freedom by 1946.

"We are a peaceful people. We have developed our natural resources to the envy of all the civilized peoples of the world. You helped us build roads, establish schools and colleges. We are grateful to those American physicians who introduced the principles of hygiene. We have a distinct system of education—an advanced system of medical education. The Philippines before the war had one of the few governments of the world with a balanced budget. The government in exile is still solvent.

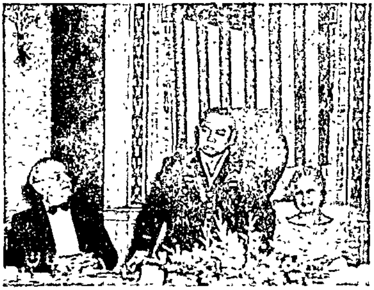
"Then came Pearl Harbor, and a few days later the Philippines were also attacked at several points. The President of the United States ordered us to muster everything we had to side and fight with the United States. He did not need to do that. Our President, who is still sick, proved that to the world in that great hour of our history. The Filipinos will fight with and for America to the bitter end.

"We requested General Douglas McArthur to formulate a defense of the Philippines. The whole resources of our country were dedicated to the defense of our sovereignty. To the 3000 mothers of American soldiers whose sons will never come back, we have 26,000 mothers whose sons will remain in the dust of Bataan.

"Our government had to change its seat from Corregidor, fleeing to unoccupied territory, thence to Australia and finally establishing a government in exile in Washington, D. C. When we were met by President Roosevelt, members of his cabinet and chiefs of staff upon our arrival in Washington, we were accorded honors given only to heads of independent nations. We have been represented in the Pacific War Council by our President.

"President Roosevelt saluted our people's courage and gave his pledge that the Philippines shall be reclaimed and given their independence. Behind that pledge stand men and arms. 'I promise,' he said, 'to establish the independence of the Philippines as soon as the invaders are removed.' There is now in Congress a resolution to recognize immediately the freedom of the Philippines. These are evidences that America has kept faith with my people.

"Bataan knows that we view our problem not only from the standpoint of America and the Philippines, but a firm vantage ground whence world peace may be held secure from the cruelty of war. Now we have to view our problem from an angle where good will and peace to men will remain inviolate.



Major Benvenuto Diño delivering address.

"On my entrance into the International College of Surgeons, which does not distinguish creed, race or color, I accept my responsibility in all humility, realizing that this honor carries a great responsibility of public service.

"I shall carry back to my people from this great country of opulence and prosperity, the land of the free, the home of the brave and the happy, the good will you have shown to me and my people. And God willing, there is going to be a rebirth of that spirit, native to my country, which prompted the acts of heroism that we have performed.

"We have re-earned our right to our freedom and a seat in that federation of nations we pray is to be preserved now and forever.

"My friends, before I close I wish to express to you all my grateful appreciation of this great honor. I assure you that after the war is over—and we are sure to win—we shall reveal to you again the character of the Filipino heart and sincerity of the Filipino soul. Our spirit cannot be daunted, our faith swerved, nor our loyalty to America lessened."

IN MEMORIAM

DR. FREDERICK GEORGE DYAS, F.A.C.S., F.I.C.S.

(1873-1943)

Dr. Frederick George Dyas, Regent of the state of Illinois for the International College of Surgeons, died on March 4, 1943 from hypertensive heart disease. He was a staunch supporter of the International College of Surgeons and its ideals, and an admired friend and colleague.

His grandfather, Dr. William Godfrey Dyas, was prominent in the early medical history of Chicago. For a short while in 1859 he collaborated with Dr. Daniel Brainerd in editing the *Chicago Medical Journal.* In 1870 he aided Dr. William H. Byford in organizing the Women's Medical College, where for five years he was professor of Theory and Practice of Medicine. Dr. Dyas was president of the Chicago Medical Society and active in other medical organizations. Dr. Frederick Dyas' father, Dr. George K. Dyas, practiced medicine in Chicago for many years.

Dr. Frederick Dyas was born in Chicago on Dec. 3, 1873. He attended the Universities f Michigan and Chicago and was graduated om Northwestern University Medical School 1904. From 1904-1906 he served internships at Mercy and Cook County Hospitals. During 1918-1919 Dr. Dyas was on the staff of the Ford Hospital and held the post of Chief Surgeon at Camp Logan. He was also Chief Surgeon, Cook County Hospital, Attending Surgeon, Hinsdale Sanitarium and Hospital, Professor of Surgery and Clinical Surgery, University of Illinois College of Medicine.

Frederick George Dyas, M.D., F.A.C.S., F.I.C.S.

Affiliations included: American Medical Association, American College of Surgeons, International College of Surgeons, Illinois State Medical Society, Chicago Medical Society, American Association of Railway Surgeons, Chicago Institute of Medicine, Western Surgical Association, Chicago Surgical Society and the Society of Medical History of Chicago.

Dr. Dyas was the author of numerous contributions to medical journals.

His passing is an irreparable loss to the surgical profession of Chicago and to his legion of friends.

RECENT DEATHS

Dr. Homer S. Wonders, F.I.C.S., prominent ophthalmologist, passed away on August 27, 1943 in Philadelphia. Dr. Wonders was a delegate of the United States Chapter of the International College of Surgeons to the Third International Assembly held in Mexico City in August, 1941.

Dr. Clifford Athenius Lutgen, F.I.C.S., former president of the Nebraska Hospital Association passed away in Auburn, Nebraska on August 15. Dr. Lutgen was known in southeastern Nebraska not only as a fine surgeon, but also as a big game hunter.

BOOK REVIEWS

Textbook of Clinical Parasitology, including Laboratory Identification and Technic. By David L. Belding, M.D., Professor of Bacteriology and Experimental Pathology, Boston University School of Medicine. 909 pp., 1356 illus. on 279 figs. and 82 illus. on 4 full-p. col. pl. $8.50. D Appleton-Century Co., New York, 1942.

THIS volume on parasitology is particularly timely, not only for medical men in the armed services but likewise for Public Health officers and physicians in private practice. What with the considerable facilities for the rapid transmission of parasites from their native habitat to new areas presented by the airplane and the mass movements of millions of civilians and soldiers in the war zones, the problem of controlling parasitic infections assumes major importance.

Belding's text deals with this problem authoritatively. It provides urgently needed information on the numerous parasites which infect man, from the standpoint of pathology, diagnosis, treatment and prevention of the diseases they produce Perhaps never before has the study of parasitology been so essential to American medicine as it is today, and this useful volume meets that challenge most comprehensively. It is up to date, written in a style that is simple, instructive, clear and essentially practical. Several hundred illustrations help to illuminate the text by giving pictures of the morphology and life cycle of the parasites. A separate section is devoted to technical methods in diagnosis and treatment.

With the return of our armed forces, American physicians will be called upon to recognize and treat some of these parasitic diseases and they will find inestimable assistance in the pages of this text. The book is highly recommended.

A. L. Wolbarst.

Clinical Laboratory Diagnosis. By Samuel A. Levinson, Prof. of Pathology, Univ. of Illinois College of Medicine, and Robert P. MacFate, Asst. Prof. of Pathology, Univ. of Illinois College of Medicine. 2nd ed. 980 pp., 156 engrav., 15 pl. $10. Lea & Febiger, Philadelphia, 1943.

A TEXTBOOK of laboratory medicine under the best of circumstances would be difficult to write because of the great variety and complexity of procedures which must be elucidated. Many books have been written emphasizing mainly the technical aspects of the various procedures and leaving much to be desired concerning principles and efficiency. The authors of this book have attempted to strike a happy medium, but at the same time be as thorough as possible.

One must question whether the profusion of tables, which are, of course, important, serves the purpose for which it was intended. Technicians not too well trained in the principles of medicine may experience difficulty in the correct interpretation of the dogmatism of tables. However, as a method of quick reference, their importance is obvious.

The style of the book is easy. References to original work are numerous. The index is well arranged, but an index of tables might be of value.

The recent edition includes many new procedures, although methods and principles described conform to those of the previous edition. This book brings our knowledge of laboratory medicine up to da

I. Neima

In Search of Complications. By Eugene de Savits 396 pp. Simon & Schuster, New York, 1940.

EUGENE de Savitsch has had little need "search" for complications in his life. Th complications—from the evidence of his ow narrative—appear to have sought him.

A revolution complicated by warring factions among the counter-revolutionaries; an elephant hunt complicated by red ants; a wage-earning career complicated by tuberculosis—these as well as the infinite complexities of laboratory, medical school, and professional practice, have pursued this brilliant young doctor.

A nice sense of humor and zest for adventure mark the pages of his book, giving balance to the accurately observed scientific data which he presents with unusual simplicity and with the clarity which comes to a man who thoroughly understands his subject.

Starting from the static secure position of a fortunate son of aristocratic Russia, Dr. de Savitsch has swung around the globe to stand, as the book ends, a not-too-unhappy exile viewing from the Polish border his now forbidden Homeland. He has been a soldier of a lost cause in Siberia; an exponent of Yankee shrewdness in Japan; a counter-jumper, a sugar packer and a tuberculosis patient in sunny California; a medical student in Chicago; a medical and surgical "fellow" in the Congo and in the laboratories of France, Belgium and Austria.

Fascinating to layman and professional alike are the descriptions of the student doctor's laboratory experiments with tubercular guinea pigs and antitubercular vitamins, and the graduate surgeon's observations on such diverse matters as sleeping sickness. leprosy, tuberculosis, French operative technics, and even medical racketeering in Vienna on the eve of *Anschluss*. Tuberculosis, which all but wrecked his own career before he had begun it, claims the center of his interest.

Much that Dr. de Savitsch has to say about medical education and hospital organization in America is worth long and serious thought. His description of the process by which a patient may have a splinter removed from his finger at a super-organized modern clinic sparkles with sly satirical humor. With rapierlike thrusts he pokes fun at the rigidity of professional etiquette, which straitjackets young ideas; at the meticulous division of labor which, he claims, serves the medical men of America exactly as the caste system of India serves its millions of superfluous workers; at the buck-passing, the jealousies, the politics, which mar the record of his great profession.

The book is well worth reading, both as entertainment and as a stimulant to thought.

H. van d. W.

Military Surgical Manuals, Vol. V (National R search Council) Burns, Shock, Wound Heali and Vascular Injuries. 272 pp. $2.50. W. Saunders Co., Philadelphia, 1942.

A COMPACT mass of illustrated information, well organized, clearly titled and well-indexed. With the present confusion [illegible] ting in the therapy, or choice of therapy, in burn cases, this book is quite timely. The literature on shock is brought up to date and made applicable to the clinical patient. The review of wound healing is well done, while the section on Vascular Injuries evidences an enormous amount of research. The book is a valuable addition not only as a Service Manual, but as a guide and reference work to any one participating in emergency or industrial work.

William Bates.

Atlas of Ovarian Tumors. By Gemma Barzilai, M.D., New York City. Preface by Fred W. Stewart, M.D., Pathologist, Memorial Hospital for Treatment of Cancer and Allied Diseases, New York City. 264 pp., 258 illus., 45 in col., 58 pl. $10. Grune & Stratton, New York, 1943.

THIS book is a unique presentation of ovarian tumors, magnificently illustrated. The order of presentation follows a classification and terminology that Dr. Walter Schiller uses in his teachings. The discussions are indexed marginally on the page, including definition, terminology, frequency and age incidence, gross and microscopic pathology, structural arrangement, histogenesis, clinical course and therapy. While the book deserves enthusiastic praise, the omission of non-neoplastic tumors, such as follicular and lutein, and endometrial cysts makes the volume incomplete as an atlas. As some approach is made in the discussion, it would have been well to include an illustration of the masculinizing effect of some tumors before and after the appropriate treatment. This excellent book is recommended to all gynecologists and pathologists.

A. Kobak.

Military Surgical Manuals, Vol. II (National Research Council) Ophthalmology and Otolaryngology. 331 pp., with 24 figs. $4. W. B. Saunders Co., Philadelphia, 1942.

PART I

THE Compendium on Ophthalmology, edited by Harry S. Gradle, M.D., William S. Benedict, M.D., Sanford R. Gifford, M.D., Peter C. Kronfeld, M. D. and Lawrence T. Post, M.D., is a manual intended for the use of the non-ophthalmologist in testing the eye-function of soldiers and in treatment of eye diseases and injuries on the battlefield. Gradle has fulfilled the purpose of the manual especially well in his chapter on acute inflammations of the eye. He does not describe all inflammations, but discusses the different causes of ''red eyes,'' ''swelling of eyelids,'' ''tearing,'' ''discharge from eyes'' and other conditions, describing the most striking symptoms for the non-specialist. Ulcer of the cornea, as well as functional methods for testing the light-sense (important in hemeralopia) or malingering, are too briefly described for a physician who is unacquainted with these conditions and their testing. I doubt, too, whether a general surgeon could or should perform operations on the eyeball as described in the chapter on surgery of the eye. Some who had training in ophthalmology may be able to do eye surgery in emergency cases following the very good illustrations in Benedict's chapter. The chapters on ''Injuries of the Eye'' (Gifford) and ''Medical Treatment'' (Kronfeld) are instructive. Chemical burns of the eyes are explained in an abridged form from a manuscript by Alan Woods and William F. Hughes, Jr.

Joseph Igersheimer.

PART II

The section on Otolaryngology gives up-to-date information in compact form. The chapter written by Kacanjian deals with the primary treatment of gunshot wounds of the face. Examination, suturing the wound and the treatment of the maxillo-facial fractures are discussed in a clear and helpful way and excellently illustrated. Mosher and Grove present briefly but well the anatomy of the ear, pathways of infections, injuries of the external ear and of the tympanic membrane, fractures of the temporal bone, some frequent conditions of the auditory canal, sudden deafness and meningitis of otitic origin. Fracture of the temporal bone and the cribriform plate is presented by Grove. Bunch comprehensively discusses hearing tests, Coates the injuries of the neural mechanism and malingering. The chapter on the ear in aviation by Fenton mentions all the important facts. Two chapters on petrositis, with x-ray findings, are represented by McMillan, and Kopetzky gives instructive information regarding its pathology and treatment. The discussion by Fenton of examination of the ear in military aviation and of chemotherapy are timely, as is the chapter by Berry on reëducation of the soldier suffering from deafness or speech defects. Mosher discusses in a simple but thorough manner infections of the nasal sinuses, osteomyelitis of the frontal bone, cavernous sinus thrombosis, orbital abscess, nasal meningitis and brain abscess. Chapters dealing with injuries of the esophagus are brief. Treatment of burns of the esophagus by early use of soft tubes and of the treatment of perforation of the esophagus due to foreign bodies or gunshot has been omitted. Likewise in discussing neural paralysis, Loeb neglects neuralgia of the laryngeal superior nerve. Hill gives practical points in the diagnosis and treatment of abscesses of the throat, and in conclusion Imperatori surveys the most common injuries of the larynx, hyoid and trachea. The manual will be of special value to the military surgeon.

O. Hirsch.

An Evaluation of Vaginal Hysterectomy

WALTER J. REICH, M.D., F.A.C.S., M.I.C.S. AND
MITCHELL J. NECHTOW, B.S., M.D.*
CHICAGO, ILL.

FROM our experiences in the Gynecological Clinic at the Cook County Hospital, and in reviewing pathologic conditions present in a cervical stump following supracervical hysterectomy, we have come to the conclusion that whenever a uterus is to be removed it should be removed completely and not partially, the condition of the patient permitting. There is an ever-increasing number of cases of malignancy of the cervical stump, both of the portio vaginalis and of the endocervix. In addition, we have had the opportunity of observing quite a few cases of strictures, cervicitis and endocervicitis; also bleedings and discharges from erosions, eversions and polyps of the stump. Many women are incapacitated and many more lose their lives because of the incomplete removal of the uterus.

Vaginal hysterectomy has come to the fore in recent years and rightly so. In our experience with hysterectomies, the mortality and morbidity are markedly decreased by the vaginal as compared to the abdominal approach.

It is paramount that an intelligent bimanual examination be performed and that the interpretation and correlation between the results of the examination, the patient's history, laboratory fi ings and general physical condition made.

INDICATIONS AND CONTRAINDICATIONS

The *indications* for a vaginal h terectomy are the same as for abd inal hysterectomy, namely, vari pathologic conditions of the ute causing bleeding or pressure sympto or cases of descensus, prolapsus or p cidentia.

It must be borne in mind that th are certain pelvic pathologic enti which, if present, are distinct contrai cations to the vaginal approach for removal of the uterus. May we state w unirrevocable emphasis that the rea difficulties are encountered in vagi hysterectomies, not only by the oc sional performer of this operation also by the men who prefer this ro is not so much due to technic as to tinct contraindications to the proced

To us the contraindications stand just as prominently as do the conditi which must be present for the appli tion of forceps to the obstetrician.

Clinical judgment, proper selection cases according to indications and "c ditions" present will prevent seri morbidity and mortality. The opera who begins a vaginal hysterectomy and after having worked for some time finds it impossible or impractical to continue the operation from below, will be spared the inevitable recourse to abdominal surgery.

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* From the Gynecological Division of the Cook County Graduate School of Medicine.

Therefore it is imperative to know, *when not to do* a vaginal hysterectomy. And we therefore offer the following *contraindications:* (1) residual pelvic inflammatory processes, regardless of the etiology, whether postpartum, postabortal, gonorrheal or tuberculous in nature, with resultant secondary uterine fixation; (2) endometriosis with associated fixation of the tissues; (3) malignancy with fixation; (4) postirradiation fixation; (5) cases which have had a previous laparotomy with subsequent fixation. (In our experience a reoperative case with *unlimited* mobility of the uterus can have a vaginal hysterectomy); (6) intraligamentary fibroids; 7) pseudo-descensus, in which we find long hytrophied cervix but a fixed rpus; (8) narrowing of the vaginal tract due either to postoperative scarring, postpartum scarring or secondary contracture due to an inflammatory process.

The size of the uterus is not nearly as important a contraindication as the above associated pathology. A uterus the size of a four to four and one-half month pregnancy can be removed vaginally by means of morcellation.

MEDICAL PREOPERATIVE PREPARATION

Before proceeding with the actual technic, we should like to emphasize the importance of preoperative preparation. The patient should have a complete check-up, including detailed history, thorough bimanual examination, complete systemic inventory and confirmatory laboratory examinations. When the patient's condition is such that she is a definite minimal operative risk, we are ready to proceed. Here mention should be made that in the past few years we have paid considerable attention to building our patients up with the necessary preoperative transfusions, amino acids, and high vitamin diets. We have also made detailed studies of other systems such as the genito-urinary tract and the cardiovascular system and have had associated pathology controlled or corrected prior to proceeding with surgery.

GYNECOLOGIC PREOPERATIVE PREPARATION

The general systemic preparation has already been mentioned. We are now using vitamin K, 15 mg. daily by mouth for one week preoperatively in every patient, and there seems to be a distinct reduction in the amount of oozing, especially of the vaginal walls. Since the advent of vitamin K there has been a marked reduction in the oozing associated with this procedure. This, in our opinion, is a distinct advance and greatly facilitates the operation. Preoperative douches are very important, using any medication which will produce a low hydrogen ion concentration in the vagina, ranging from PH 4 to 4.5. Substances such as lactic acid (one dram to one quart), plain white vinegar, boric acid, or in some instances, sulfathiazole douches (eight grams to one quart of water), may be used for a week or two preoperatively. Eight hours preoperatively we start 2000 cc. 10 per cent glucose with 30 mg. vitamin K by the intravenous route.

The direct preoperative preparation is made as follows: the labia majora, labia minora, the region of the symphysis pubis, the lower portion of the abdomen and the upper portion of the thighs and vagina should be carefully scrubbed for ten minutes with soap and water. This is followed by rinsing with alcohol and painting with merthiolate, mercresin or any other antiseptic. Since we have discontinued using tincture of iodine we have noticed the absence of skin burns and fewer infections.

METHOD AND CHOICE OF ANESTHESIA

The choice of anesthesia is most important; each patient requires an anestetic which is most suitable for her, depending upon her basal metabolic rate, age, blood count, blood pressure, weight and general systemic condition. Many of our patients are in the older age brackets and have certain cardiorenal changes which come with age, and also many residues of other systemic changes. It has therefore been our policy in the past to use such anesthetics as direct local infiltration, ether by the open or closed method, cyclopropane, ethylene, and nitrous oxide induction. In the inhalation group we give the minimal amount of basal anesthesia and the maximum of oxygen mixture.

However, in some cases of local anesthesia, the method was not entirely satisfactory due either to the extreme apprehensiveness of the patient or to the occasional difficulty in finding the correct cleavage planes as a result of the infiltration.

In regard to the inhalation group, we are of the opinion that, irrespective of the judicious choice of anesthesia and the skill of the anesthetist, there is always a percentage of risk, especially in older women. The risk comes not so much as a direct result of the administration of the anesthetic, but rather a risk of postanesthesia complications.

With these facts in mind, an anesthetic was sought which might be more suitable in this type of surgery. We have found what we think is a choice anesthetic for vaginal hysterectomy and we have used it in over fifty cases. The method we have been employing is that of sacral block. The anesthetic is made by preparing a solution of 100 cc. of 1 per cent metycaine in normal saline with ½ cc. of 1:1000 adrenalin. We have used 1 per cent novocaine but prefer metycaine because of the earlier onset of anesthesia, greater intensity of anesthesia, and 50 per cent greater duration. We prefer to use the metycaine in saline rather than sterile water because the saline solution is less irritating. We usually inject 35 cc. into the caudal canal in doses of 5 cc., 20 cc., then an additional 10 cc., if necessary. The second sacral foramen on each side usually requires 10 cc., the third 3 cc., and the fourth 2 cc. A few of our cases required about 10 cc. of 2½ per cent sodium pentothal intravenously, the discomfort apparently being due to traction upon the peritoneum. We have been using our regular preoperative medication of morphine and atropine, or morphine and scopolamine, and to date have had no anesthetic complications, either immediate or latent. In addition, because of the discomfort experienced in a few cases, we are now also injecting the fourth and fifth lumbar and first sacral foramina with 5 cc. of the solution. Nembutal is also added preoperatively so as to minimize the possibility of anesthetic reaction because of the additional amount of solution used. To date we have had just a few of these cases, and therefore cannot draw any conclusions by comparison with our previous method of sacral block.

Of all the anesthetics we have used in vaginal hysterectomy, the sacral block seems by far the most ideal The method of administration is relatively easy except in a very adipose patient. The relaxation is complete, and postoperatively these patients can be on the backrest as soon as they return to bed. We believe the latter to be all-important in the older age group [illegible] since factor in preventing pulmonary complications. We have now started to use continuous caudal anesthesia averaging 28 cc. of 1½ per cent metycaine, and although our experience to date is very limited, it has been extremely satisfactory and we have had no complications from this type of anesthesia.

OPERATIVE TECHNIC

The patient is placed with the buttocks slightly over the edge of the table and in a moderate Trendelenberg position. This facilitates the operative procedure and has a tendency, as in an abdominal section, to allow the bowels to fall toward the diaphragm.

We suture the labia to the towels and to the skin lateral to the labia. This in many instances obviates the use of lateral retractors. The anterior lip of the cervix is then grasped with a single toothed tenaculum. Extreme care should [illegible] taken not to include the bladder, which might readily be done, especially when a marked cystocele is present; or when there is a distortion due to the citcatrization as the result of an old laceration extending up into the base of the broad ligament. To prevent this, place a metal catheter into the bladder, which will show very definitely the relation of the bladder to the external os. Two heavy silk sutures going through the anterior and posterior lips of the cervix replace the tenaculum. We prefer the silk sutures because they replace a cumbersome instrument and exert less traction on the uterus. Pitocin is then injected into the anterior wall of the cervix, except in the presence of a marked cystocele when it is injected into the posterior lip. We have discontinued the use of pituitrin and use only pitocin (which does not contain the vasopressor substance), because of the absence of pituitrin shock, or marked rise in blood pressure, effect on the coronary arteries, and because of its equally effective oxytocic action. It is a known fact that there have been mortalities as a result of the use of pituitrin when this medication definitely had not been accidentally injected into a blood vessel. We are of the opinion that pitocin has a definite tendency toward decreasing the bleeding during the operative procedure and reducing the size of the uterus. The dose which is usually employed is 1 cc., but 2 or 3 cc. may be used in large uteri with no deleterious effects. (Fig. 1)

A circular incision is made in the vaginal wall just above the external os. It is important at this point to judge the distance the bladder has descended on the cervix so as not to injure it. The insertion of the metal catheter as previously mentioned will prevent this accident. The cleavage planes are then found anteriorly and posteriorly and the bladder is advanced upward off the cervix to expose the anterior cul-de-sac. The posterior vaginal wall is reflected off the cervix to expose the posterior cul-de-sac. (Fig. 2)

The parametrium is then clamped with straight Fischmann angiotribe forceps, cut, and transfixed on both sides. The posterior cul-de-sac is opened next and the utero-sacral ligaments are exposed, clamped with curved angiotribe forceps, cut, and transfixed. (Fig. 3) There is a definite difference in the mobility of the uterus after the severence of the parametrium and utero-sacral ligaments. Because of this increased mobility, it is easier to enter the anterior cul-de-sac and thereby prevent injury to the bladder.

After the parametria have been disconnected and the anterior and posterior cul-de-sacs opened, the uterus is delivered either anteriorly or posteriorly, depending usually on its preoperative

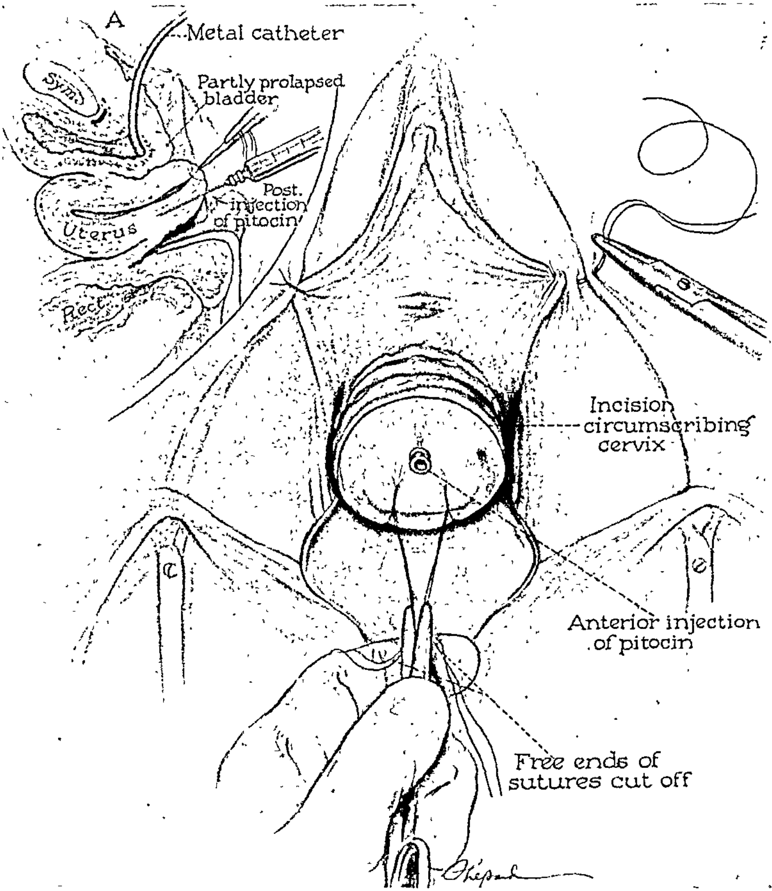
A
Metal catheter
Sym.
Partly prolapsed bladder
Post. injection of pitocin
Uterus
Rect.
Incision circumscribing cervix
Anterior injection of pitocin
Free ends of sutures cut off

Fig. 1. Showing braided silk in place. *Pitocin* injected into anterior lip. Ante into vaginal wall. Insert A. Pitocin injected into posterior portion of cervix bec to external os.

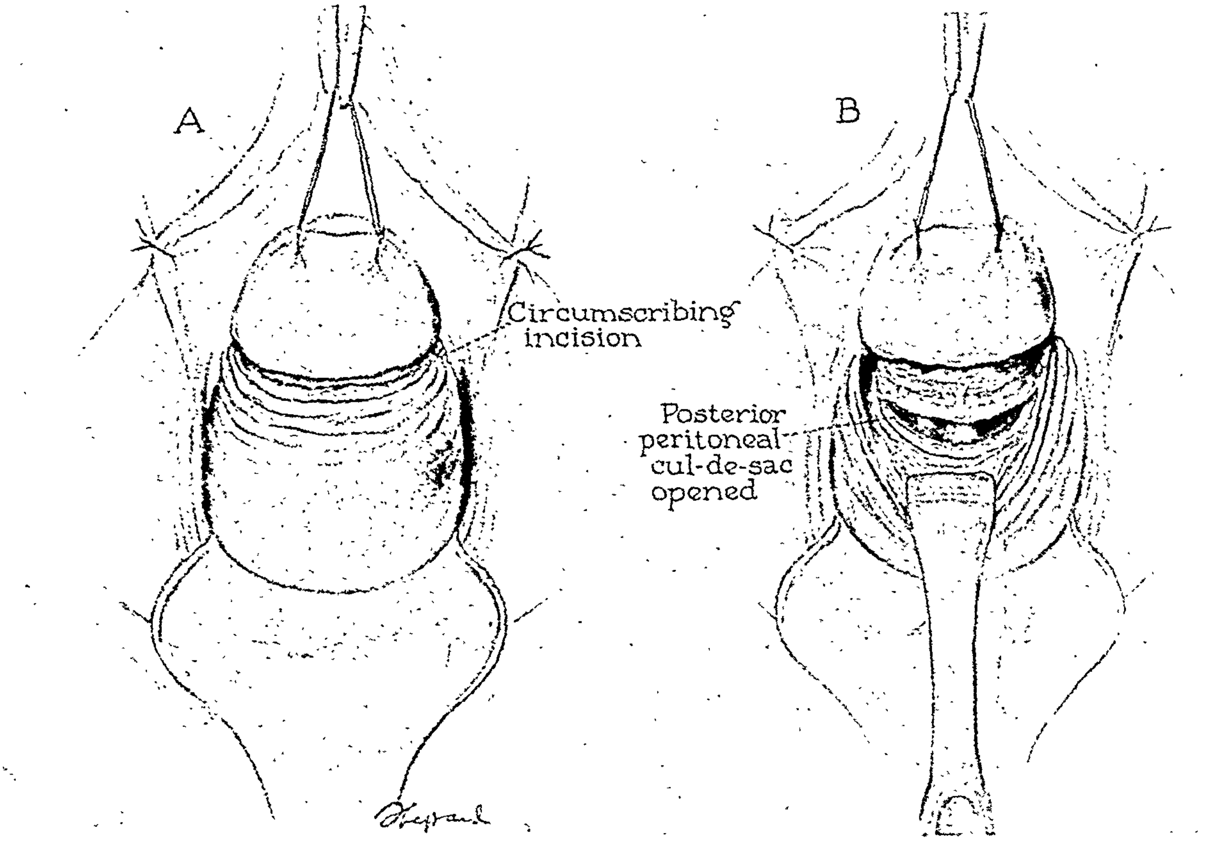

Fig. 2. A. Posterior circumscribing incision into vaginal wall. B. Opening of posterior cul-de-sac.

position. Just before the exteriorization of the corpus, we almost routinely do a guillotine amputation of the cervix; and the internal os is covered with sulfathiazole powder. We prefer to amputate the cervix because: first, it is easier to turn a rounded ball-shaped body as compared to a pear-shaped body; and second, we probably decrease the possibility of peritonitis as we do not contaminate the peritoneal cavity with the cervix. A uterus in the anterior plane of the pelvis is more easily delivered through the anterior cul-de-sac. A retroverted uterus is much more easily delivered through the posterior cul-de-sac.

The broad ligaments are clamped with straight Fischmann angiotribes from above downward, as in abdominal hysterectomy, and the uterus severed from the broad ligaments. The tissue in the broad ligament clamps is now transfixed. (Figs. 4 and 5)

The closure in a vaginal hysterectomy is performed according to the same principles as the closure in a total abdominal hysterectomy, namely, support of the vagina and peritonization. This is accomplished by sewing, *on either side,* the anterior vaginal wall, anterior peritoneum, round ligament, utero-sacral ligament, parametrium, posterior peritoneum, and posterior vaginal wall. After this is completed, interrupted sutures are placed through the anterior vaginal wall, anterior peritoneum, posterior peritoneum and posterior vaginal wall. We emphasize placing two figure-of-eight sutures just lateral to each angle to avoid latent hemorrhage; all the bleeding in these cases comes from the angles. (Fig. 6)

Subsequent to the completion of a vaginal hysterectomy we are of the opinion that all cases should have a pelvic floor repair. The question of anterior wall repair depends entirely upon the amount of involvement, but a perineorrhaphy should be performed even though there is only a slight relaxation. Upon completion of the perineorrhaphy we insert a two-inch plain gauze pack into the vagina which is removed in twenty-four hours.

NEWER ASPECTS OF POSTOPERATIVE TREATMENT

The exact treatment of the patient after operation naturally depends on her postoperative course, but we resort freely to intravenous supply of fluids, blood and plasma if necessary. We administer routinely a daily dose of vitamin K of 30 mg. for two or three days to help control the postoperative vaginal

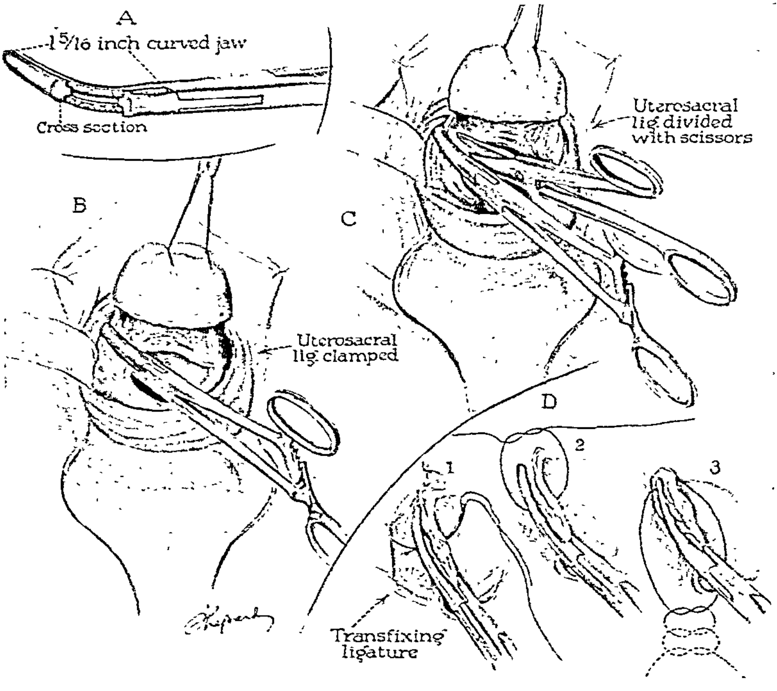

Fig. 3. A Curved Fischmann angiotribe forceps showing longitudinal ridge which permits firm grasp of tissue. B. Clamping of utero sacral ligament. C. Severing of uterosacral lig[illegible] D. T[illegible]xing ut[illegible] ligament with catgut This type of suture material is used in all subseq[illegible] of [illegible]ation.

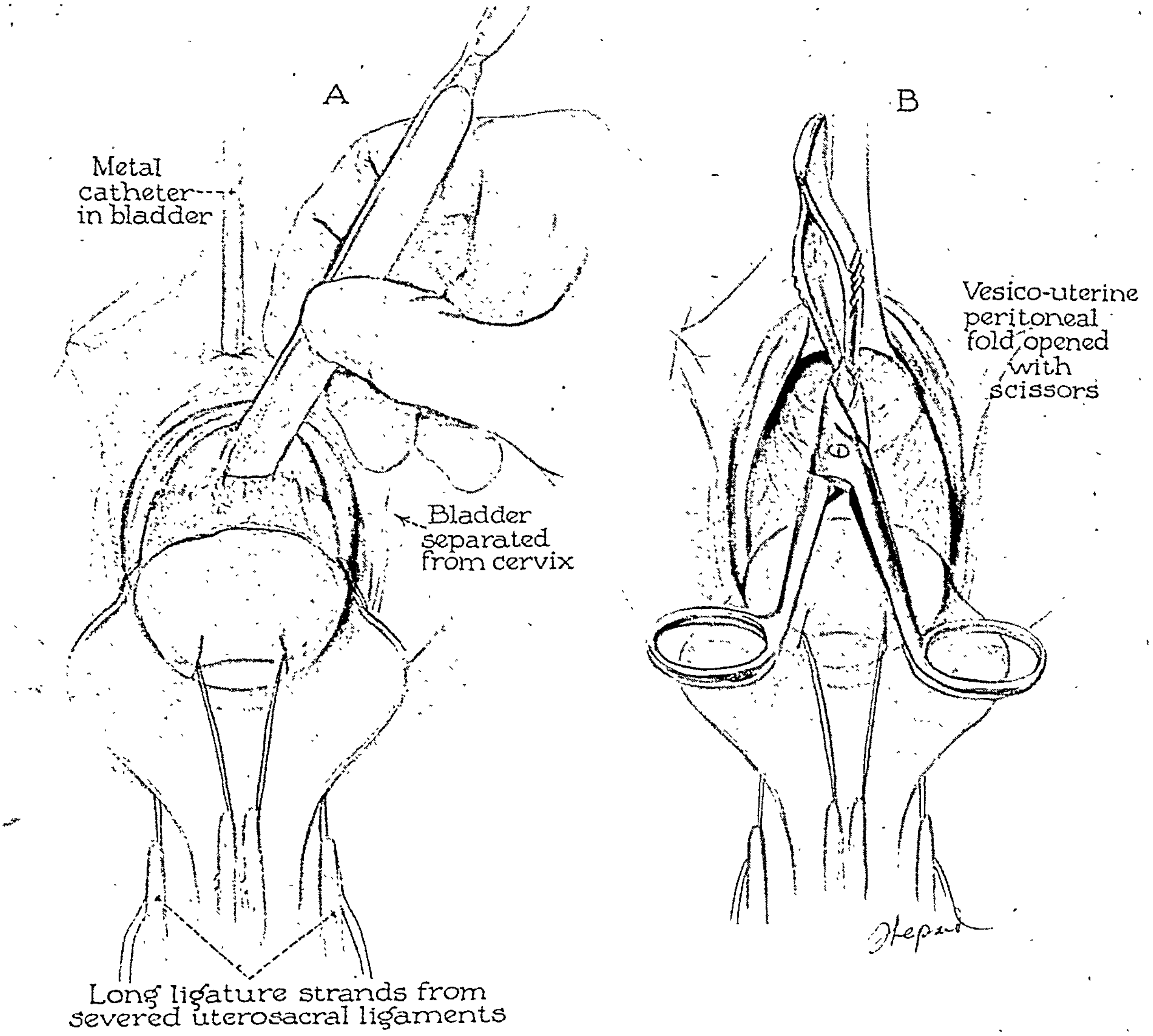
A
Metal catheter in bladder
Bladder separated from cervix
Long ligature strands from severed uterosacral ligaments
B
Vesico-uterine peritoneal fold opened with scissors

Fig. 4. A. Advancing bladder off cervix. B. Opening of anterior peritoneum.

wall oozing and use 3000 mg. of vitamin C daily for two or three days for good wound healing. These vitamins are given directly into the intravenous fluids, which are usually 1000 cc. of 5 per cent glucose in normal saline and 2000 cc. of distilled water in twenty-four hours. In one case w [illegible] developed a postoperative extra [illegible] eal infection, sulfathiazole pow [illegible] used by insufflation into the vagi [illegible] xcellent results.

COMPLICATIONS AND METHODS OF PREVENTION

We are of the opinion that some of the complications of vaginal hysterectomy are preventable, primarily by thorough systemic check-up of the patient preoperatively. *Hemorrhage,* which we have seen in a number of cases, very often does not occur until from eight to fourteen days postoperatively. This is probably due to sloughing of a vessel or

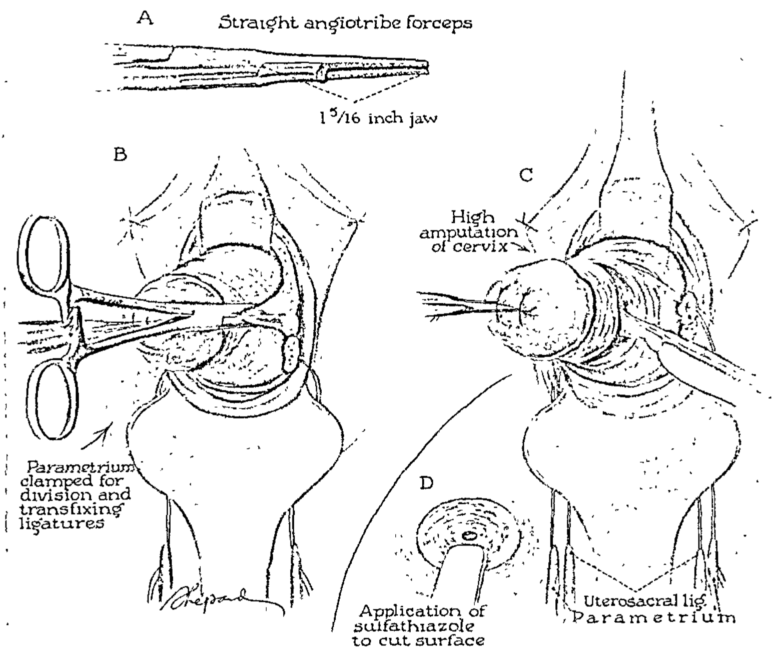
A
Straight angiotribe forceps
1 5/16 inch jaw
B
C
High amputation of cervix
Parametrium clamped for division and transfixing ligatures
D
Application of sulfathiazole to cut surface
Uterosacral lig.
Parametrium

Fig. 5 A. Straight angiotribe forceps. B. Clamping of parametrium and lower portion of broad ligament. C. Showing ligatures on uterosacral ligaments and parametrium. High amputation of cervix. D. Sulfathiazole.

vessels secondary to a low-grade infection. This can probably be prevented by maintaining a normal PH (4-4.5) in the vagina preoperatively, and employing sulfathiazole insufflation treatments as soon as the diagnosis of low-grade infection is made.

We also feel that the figure-of-eight sutures placed just lateral to the angles during closure of the vaginal vault are distinct factors in preventing this latent bleeding. In practically all the postoperative bleeding cases which we have observed, the site of the hemorrhage was found to be in the angles of the vagina; and since we have been employing these "safety sutures," the complication of postoperative hemorrhage has not been observed.

Peritonitis is a very unusual complication. It may be averted by amputation of cervix before the turning of the uterus, and by placing sulfathiazole on the new cut surface, and into the peritoneal cavity just before closing as we have done routinely for several years. Also, careful preoperative preparation of the vagina as previously discussed, is a distinct factor in the prevention of this complication.

Prolapse of the vagina is a late complication which we have seen a few times in the outpatient clinic. This can be prevented: first, by ruling out a neurologic condition which might be the primary cause of the descensus; and second, by incorporating the round ligament, parametrium and utero-sacral ligament into the vaginal vaults on either side.

Giving large doses of vitamin C in the intravenous solution for three days postoperatively is probably another factor in producing better immediate wound repair and therefore is of value in preventing this complication.

X-ray examination of the lower spine in all cases of nulliparas and those women who develop a procidentia after the birth of one child is imperative to rule out the presence of an occult spina bifida. If the latter condition is present,

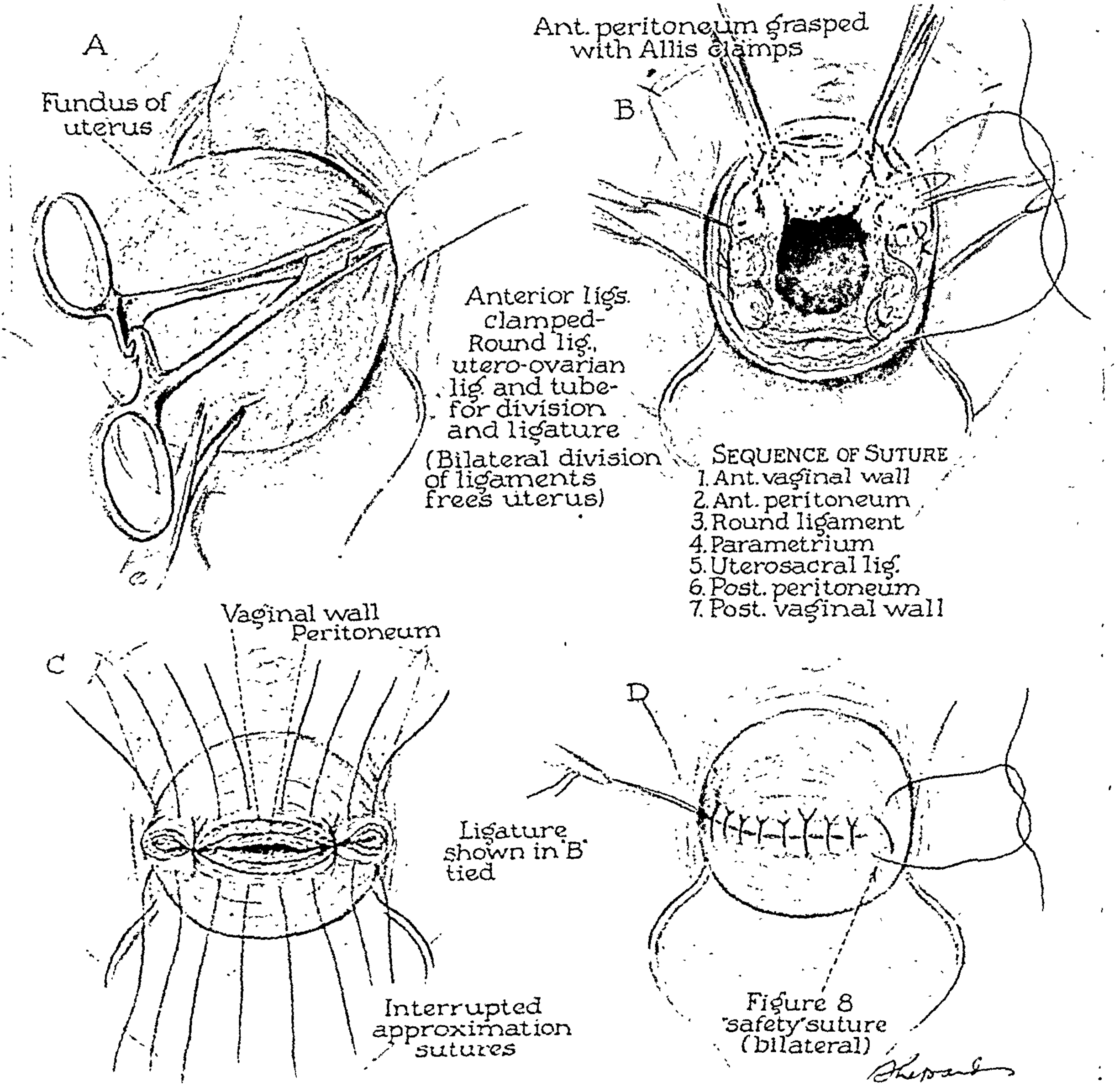
A
Fundus of uterus
Anterior ligs. clamped- Round lig., utero-ovarian lig. and tube- for division and ligature
(Bilateral division of ligaments frees uterus)
Ant. peritoneum grasped with Allis clamps
B
SEQUENCE OF SUTURE
1. Ant. vaginal wall
2. Ant. peritoneum
3. Round ligament
4. Parametrium
5. Uterosacral lig.
6. Post. peritoneum
7. Post. vaginal wall
C
Vaginal wall
Peritoneum
Ligature shown in 'B' tied
Interrupted approximation sutures
D
Figure 8 'safety' suture (bilateral)

Fig. 6. A. Exteriorization of corpus. B. Combined closure of peritoneal cavity and support of vaginal vault. C. Interrupted sutures for completion of closure. D. Showing figure-of-eight "safety" suture.

it invariably will cause a prolapse, irrespective of the type of vaginal plastic surgery attempted. Therefore, it is paramount to include a roentgenogram in the medical preoperative check-up of patients presenting the above history.

Prolapse of the fimbriated end of the tube may be prevented by the careful approximation of the peritoneal surfaces when closing the vaginal vault. In addition, insertion of sulfathioze before closing decreases the possibility of infection and therefore allows for better wound healing.

Injury to the ureters, a common dread of the occasional operator, can be prevented by careful exclusion of cases of intra-ligamentary fibroids. Further, when the uterus is disconnected from the broad ligaments and parametrium the clamps must "hug," be placed parallel to, and have their tips pointing toward the cervix and corpus.

Bladder injury is prevented by placing a metal catheter in the bladder whenever in doubt as to the relationship between the bladder and cervix. If, however, the bladder is accidentally incised, interrupted Lembert sutures should be placed into the bladder wall, and a retention catheter inserted into the bladder. The bladder wound will heal by primary intention, and a vesicovaginal fistula will be prevented.

Bowel injury may be averted either by not performing a vaginal hysterectomy following a previous laparotomy or by carefully walling off the bowels with a tail sponge and thus preventing the intestines from entering the operative field.

Shortening of the vagina and the accompanying dyspareunia has not been encountered in our cases. This may be attributed to the fact that we suture the round and utero-sacral ligaments into their respective lateral vaginal angles thus adequately supporting the vaginal vault and thereby maintaing normal vaginal depth.

CONCLUSIONS

Vaginal hysterectomy has many advantages over the abdominal removal of the uterus; the reasons, indications and contraindications have been discussed. The preoperative measures, both medical and gynecologic, and the surgical technic is presented, aided by illustrations. The postoperative treatment and prevention of complications are considered.

Several innovations are suggested, such as the use of pitocin, vitamin K and vitamin C, continuous caudal anesthesia, and the employment of the sulfonamides, which seem to have materially aided in the success of the procedure.

It is with the hope of simplifying and clarifying this problem, and thereby securing more gratifying end-results, which prompts us to present this communication both to the general surgeon as well as to the gynecologist.

SUMMARY

In our experience, the morbidity and mortality in vaginal hysterectomies is definitely less than a corresponding number of cases of total abdominal hysterectomies. Patients who have undergone vaginal hysterectomies very often sit up in a chair on the third or fourth day after operation and as a rule leave the hospital twelve to fourteen days postoperatively. The early active movements of the patient and the early sitting up in a chair *seem to be important in* the prevention of pulmonary complications. The immediate and latent complications are definitely minimal.

Too much emphasis cannot be placed upon the ultra-importance of [illegible]paring these patients pre[illegible]ecial by very careful s[illegible] eradication of all possible factors which might in any way impede the operative or postoperative recovery of the patient. We think it important to prepare correctly the hydrogen ion concentration of the vagina as that might be a factor in decreasing the morbidity and mortality. We suggest the use of some of the newer armamentaria such as pitocin, sacral block or continuous caudal anesthesia, blood, plasma, sulfonamides and intravenous vitamin K and vitamin C.

SUMARIO

En nuestra experiencia, el estado morboso y mortalidad en la histerectomía vaginal son definitivamente menores que en el correspondiente número de casos de histerectomía abdominal total.

Las pacientes que se han sometido a la histerectomía, con frecuencia pueden ntarse en una silla al tercer o cuarto ı, y por regla general pueden salir l hospital doce o catorce días después de la operación.

La actividad temprana de la convaleciente, sentada en silla en los primeros tres o cuatro días después de la operación, parece ejercer una influencia profiláctica contra las complicaciones pulmonares.

No podemos encarecer demasiado la preparación de la paciente para la operación, especialmente por medio de un esmerado inventario del estado orgánico y funcional del sistema a fin de erradicar todos los factores que pudiesen impedir el curso normal de la convalecencia.

Creemos de gran importancia la preparación exacta del PH de la vagina como factor en la disminución de la morbilidad y mortalidad. A ese fin sugerimos el uso de algunas de las armas en el arsenal médico moderno tal como pitocina, bloques-sacral o la anestesia caudal continua, transfusión de sangre, plasma, sulfonamidas y vitamines K y C, vía intravenosa.

RÉSUMÉ

D'après notre expérience la morbidité et la mortalité de l'hystérectomie vaginale sont beaucoup moins élevées que celles qui accompagnent l'hystérectomie abdominale totale. Les malades après une hystérectomie vaginale fréquemment peuvent s'asseoir après le quatrième ou le cinquième jour et ordinairement quittent l'hôpital deux semaines après l'opération. L'activité du malade et la position assise précoces du malade paraissent prévenir les complications pulmonaires.

On ne peut pas placer trop d'emphase sur la nécessité de préparer ces malades avant l'opération et d'éliminer tous les facteurs qui pourraient retarder la guérison opératoire et le rétablissement postopératoire. Il faut préparer correctement l'ion hydrogène du vagin afin de diminuer la morbidité et la mortalité. Nous suggérons l'emploi de pitocine, le blocage sacré ou l'anesthésie caudale continuel, transfusion de sang ou de plasma, les sulfonamides, les vitamines C et K administrées par voie intraveineuse.

Выводы

В нащей практике болезненность и смертность при вагинальных гистеректомиях значительно ниже, чем при абдоминальном удалении матки. Наши больныя довольно часто уже сидят на третьем дню и, как правило, оставляют госпиталь на двенадцатом или четырнадцотом дню. Раннее вставание и сидение играют важную роль в предупреждении легочных осложенений.

Авторы подчеркивают роль систематического уследования и до-оперативной подготовки. Необходимо исправить концентрацию ионов водорода влагалища, так как последняя может с'играть важную роль в болезненности или смертности. Автор также рекомендует питосин, сакральное обезболевание, переливание крови или плазмы, сульфа препараты и витамины К и Ц.

Attempts to Influence Spondylarthritis Ankylopoetica by Means of Implantations of Toxic Goiter

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BECHTEREW, in 1892, was the first to draw attention to a condition which he called spondylarthritis ankylopoetica and which was subsequently named after him. Following upon this, Struempell, in 1897, described a similar affection, and Pierre-Marie, in 1898, the so-called "spondylose rhycomyélique." But it is of no importance to distinguish between the individual types referred to, since it makes no difference whether the affection spreads in an upward or downward direction in the spinal column. It is, moreover, generally known that in all affections involving the spine there may be an associated radiculitis from irritation of the spinal nerves.

Although sometimes differential-diagnostic distinction between spondylarthritis ankylopoetica and certain types of atrophic or hypertrophic spondylarthritis is not easy and the condition may be mistaken for one of the several types of infectious spondylarthritis, in the great majority of cases, neither clinical nor x-ray identification provides particular difficulty.

Spondylarthritis ankylopoetica preponderantly attacks the male sex, its earliest symptoms usually appearing in the second or third decade. The condition is characterized by rapidly spreading ossification of the small ligaments of the spinal column to the areas above and below those first attacked. At a later stage the hip joint also becomes involved, and a union between the fifth lumbar vertebra and the sacro-iliac joint, a very typical feature of this disease, is formed.

Clinically, it is characterized by an increasing degree of stiffness of the spine, immobility, local as well as radiating pain. Thoracic respiration is more and more reduced in the course of time, and pulmonary complications are a frequent accompaniment.

Radiologically, the earliest manifestations are not easily identified. It has frequently been pointed out that in the initial stages the patients may present atrophic spondylarthritis or "sacroileitis." There is no doubt that spondylarthritis ankylopoetica may occasionally develop on the basis of such conditions, but we also know that atrophic as well as hypertrophic spondylarthritis and sacro-ileitis may continue to be present indefinitely without this development, irrespective of medical treatment or type of therapy.

The x-ray appearance of a fully developed case of spondylarthritis ankylopoetica scarcely allows [illegible] ıy [illegible] nostic doubt. "Bamboo [illegible] spine, ossification of the small ligaments, fusion of the spinal processes, disappearance of the intervertebral spaces and an eventual osseous union between the fifth lumbar vertebra and the sacro-iliac joint are the unmistakable symptoms of this particular affection.

Nothing whatever is known about its etiology. Certainly, neither infection nor inflammation play any part in its causation (at least in the type referred to in this article) even in the presence of an increased blood sedimentation rate. Nothing but unfounded theories and the usual vague speculation have so far been put forward in an attempt to give an etiologic explanation. There exists no prophylactic therapy and, in the great majority of cases, even symptomatic therapy has not yielded very satisfactory results. The anti-rheumatics give little relief, and the results of gold therapy are often also only negative (Key and Rosenfeld). Exercise therapy has also been advocated (Green), but in my patients I have not seen much benefit from this method either.

The data available on the results of roentgen therapy show that in some cases pain was actually relieved. That x-ray therapy should, however, be able to bring about genuine remissions or that it might even constitute a prophylactic measure to prevent ankylosation in "early cases" (Scott) is, in my opinion, neither probable nor has any proof of this theory been offered.

The operative method evolved by Opel and Ssamarin to influence spondylarthritis ankylopoetica operates on endocrine lines. The authors suggested parathyroidectomy in order to lower, in this way, the increased calcium level of the blood (Schkurov.) Apart from the fact that increased blood calcium is only very rarely encountered in spondylarthritis ankylopoetica, a number of authors who tried it (Chifoliau and Brain, Donati, Alessandri, Kamel Hussein) eventually abandoned the method since it produced no satisfactory results. I have also accepted this standpoint as a result of my own experience, although I must admit that initial success is possible. The authors who advocate this method emphasize the fact that a later ankylozing of the arthritic spine may be prevented. It should be pointed out, however, that those operations were not performed on already ankylosed spines.

A new approach to the problem involved checking the excessive ossification connected with this affection by inducing decalcification in the organism. Theoretically, this was a sound idea though—as will be seen below—the results proved somewhat different from what we had expected.

Conditions associated with high degree decalcification of the skeleton, the cause of which has been identified, are: (1) osteitis fibrosa generalisata of Recklinghausen, which develops as the consequence of a parathyroid tumor and the resultant over-stimulation of parathyroid function. Removal of the tumor is likely to effect the disappearance of the osseous process (Mandl); (2) chronic renal insufficiency in adults (Ginzler and Jaffé); (3) chronic fistulas of the gall bladder through which large quantities of gall fluid may escape; (4) hyperthyroidism and thyrotoxicosis. Here Askanazy and Rutishausen found decalcification to be a so frequent and unmistakable accompaniment that they considered the condition a "latent osteodystrophia fibrosa." Aub, Bauer and coworkers held a similar viewpoint, and Winkler even reported on spontaneous fractures of the spinal column in connection with hyperthyroidism.

The experimental basis to these theories was provided by Bodenheimer and

Barcham, Parkon, and Michaud (*cf.* Crotti).

Surgically, only the artificial production of hyperthyroidism could be taken into account, apart from decalcification of the skeleton through artificial production of hypervitaminosis D, or the treatment with large doses of parathormone collip, which involves a certain risk in the human subject, producing far-reaching alterations in the calcium phosphate metabolism with all the dangers connected with these changes. But even assuming this experiment would prove successful, was the active agent acidosis, increased metabolic rate or toxin? As will be seen later, the subjective improvement which was soon recorded in out-patients was, indeed, closely linked to a hyperfunction of the thyroid, but was in no way connected with decalcification.

In four cases, thyrotoxic goiter implants (taken from a patient from the same blood group) were made into the posterior rectus sheath of the spondylarthritic patient several times.

One case presented chronic recurrent progressive infectious polyarthritis. The history of this patient as well as the x-ray appearance of his bones show that this case—which, by the way, was also improved—cannot be included in the Bechterew group. Among the three typical cases of spondylarthritis ankylopoetica Bechterew, two were markedly improved, while one relapsed after a period of improvement of eight months.

The case histories are given here as briefly as possible:

CASE REPORTS

Case 1. Josef A., aged 23, farmer. On admission he was in a state of severe mental depression with suicidal tendencies. With the exception of non-recurrent malaria he had always been healthy and had never had any sort of fever. Four years previous to admission he had begun to feel pain in his left thigh, a year and a half later pain also appeared in the region of the lower ribs. Stooping soon became painful too, and since that time the patient's capacity of bending his spine forward or backward was more and more reduced, so that he was eventually unable to bend down or get up from bed.

Earlier therapy: deep roentgen therapy, gold therapy with no success.

Laboratory findings: blood sedimentation rate: 2 hrs. 50 min., BMR 0; blood calcium: 10.3 mg. per cent; blood phosphorus 3.9 mg. per cent.

X-ray examination revealed a bamboo-shaped spine involving the entire thoracic portion; ossification of the sacro-iliac ligament and the posterior longitudinal ligament of the thoracic and lumbar portions; dense shadow in the region of the acetabulum on both sides. On the whole, the x-ray appearance indicated the presence of a fully developed spondylarthritis ankylopoetica.

Therapy: From the 15th to the 20th of August the patient received 1 gm (0.06) thyroidin three times a day. On the 20th of August, implantation of thyrotoxic goiter (from a patient with BMR of +90) was made into the posterior rectus sheath. The wound healed by first intention.

September 4: The patient was able to bend down more easily and had less pain. September 7: *implantation of thyrotoxic goiter* into the posterior rectus sheath (per primam healing of the wound). *September 23:* The patient spent the whole day out of bed, he walked effortlessly and painlessly. The mobility of his spine had also improved. He was able to stoop down and pick things up from the floor and to get up from his bed unassisted. *September 28:* BMR +31. Roentgenologically, no change. The patient was re-admitted for follow-up examination on *January 20, 1942:* BMR at this time +32; blood calcium: 12.5 mg. per cent; blood phosphorus; 3.26 mg. per cent; phosphatase in the blood: 7.9 mg. per cent; roentgenologically, no skeletal changes.

His general condition was similar to that of Sept. 23, 1941. Another follow-up examination was made on *May 9, 1942.* On this occasion, the patient told us that he was able to work in an agricultural settlement for many hours a day. Now and then he had neuralgic pain in his left thigh, which showed a ready response to intramuscular novocain injections. His general mobility was much improved. After eight months, however, suddenly, for no apparent reason, his condition deteriorated rapidly. He became bedfast again and gradually developed the same symptoms as had been present before operation. Deep-roentgen therapy had no effect. He was admitted to the hospital in September 1942, with the following laboratory findings: blood calcium: 10.2 mg per cent; blood phosphorus: 8 mg. per cent; BMR +22; circulation time: 10 sec., blood sedimentation: 4-5 hours.

X-ray therapy was tried again.

Résumé: An advanced case of Bechterew's disease was markedly improved (for a period of eight months) by a toxic goiter implant, with subsequent relapse into the original condition. The activity of the implantations could be ascertained after as many as thirteen months (increased BMR). Skeletal changes have, however, so far *not* been identified.

CASE 2. David W., aged 48, chemist. Family history, negative. In 1921 he began to feel pain in the loin region, in 1928, in his shoulders and in the cervical spine. In 1928, spondylarthritis ankylopoetica (Bechterew) was diagnosed by means of x-rays. Gradually he developed such a degree of stiffness that he could not turn his head and the cervical, as well as the thoracic and lumber spine, was completely immobilized, while the movements of his hip joints were also restricted. He complained of much pain but the temperature was always normal.

Early therapy: He had been to Tiberias to have baths, and had been treated by pyramidon, atophan, exercise therapy, typhoid vaccine, gold therapy (the latter in a hospital over a period of several months), but from none of these measures did he derive any benefit.

On admission, Oct. 10, 1937, he presented a completely immobilized cervical, thoracic, and lumbar spine, as well as both hip joints. He could not walk and was scarcely able to stand up. His head was drawn down with the chin fixed to the chest and could not be moved. Stooping down was out of the question. There was flexion contracture of both hip joints. Slight bending of the knees was possible. An attempt to influence the contractures in general anesthesia and to fix a plaster-of-paris dressing failed.

The patient was readmitted on October 23, 1941. Although in the meantime he had received hormone and x-ray therapy, no improvement was recorded and his right hip joint was even stiffer than before. At this time the entire vertebral column was stiff, the chin firmly attached to the chest, no turning possible, both hip joints ankylosed. Slight bending of knee joints was still possible. The patient spent the greatest part of the day motionless in bed, supported by cushions. When he tried to get up, which he could only do with assistance, he was only able to move about on two crutches with greatest effort. Three implantations of thyrotoxic goiter were made into the posterior or rectus sheath on both sides. First implantation, *November 12, 1941;* second implantation, *November 24, 1941;* third implantation, *November 30, 1941*). Two wounds healed by first intention.

November 21: The patient spontaneously informed us that he was now able to raise his head a little. *November 27:* Raising and turning of his head had become much easier. *December 7:* Suppuration and sloughing of one of the implantations; *January 4:* The patient was now able to change his position in bed more easily than before, following diathermy treatment. *January 24:* Pain of the right hip joint was successfully treated by intra-articular percaine injections. *January 30:* The patient walked about in the halls and rooms with a walking apparatus. It cost him some effort but he carried himself more erect and was now able to remove his chin from the chest. *March 1:* He walked with comparative ease on his crutches. *March 10:* He walked with two sticks. *March 15:* The patient was discharged with all signs of a subjective as well as objective improvement. (*cf.* Fig. No. 1, a, b, c and d.)

Before admission to the hospital and shortly before he left, *laboratory findings* showed: red blood picture, negative; white cell count: Oct. 28: 4000 leukocytes; Jan. 1: 9800 leukocytes; March 1: 6600 leukocytes; calcium and phosphorus, previous to and after the operation, normal; blood sedimentation: November 1941: *one* hour; March, 1942: 1 hr. 50 min.;

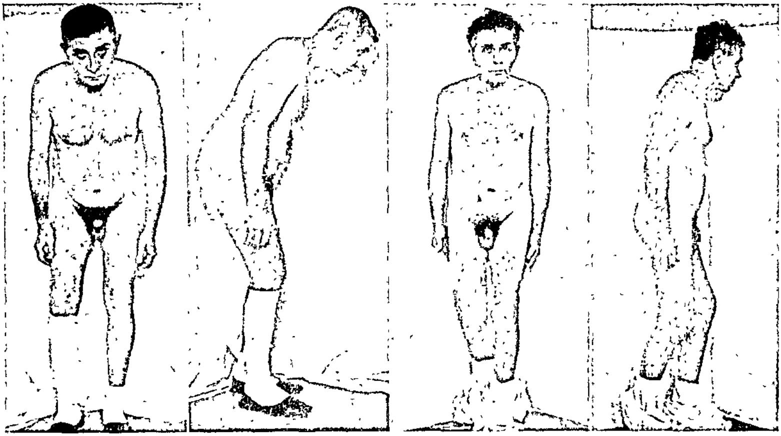

Fig. 1. (a) Maximal erection of the body before operation; (b) maximal erection after operation; (c) maximal erection before operation *en profile;* (d) maximal operation after operation *en profile.*

BMR, October 27, 1941, +15; December 26, 1941: +55; *x-ray:* no changes of the skeleton.

In June, 1942, the patient was readmitted for follow-up examination. In the meantime his condition had constantly improved. Supported by two sticks, he was now able to move about quite easily. He was also able to get up from his bed without assistance and had much less pain. He had, in the meantime, had renal colics.

Laboratory findings in June, 1942: Glucose, 88 mg. per cent; urea, 35 mg. per cent; NaCl, 6.0-7.3 mg. per cent; phosphorus, 3.85-3.2 mg. per cent; phosphatase, 4 6 mg. per cent; calcium, 10.6-11.0 mg. per cent; total protein, 8.08 mg. per cent; albumin, 4.88 mg. per cent; globulin, 3.2 mg. per cent; xanthoprotein, 2 5 mg. per cent; a/g, 1.6 mg. per cent; blood sedimentation · 2 hrs. 50 min ; BMR +30.

X-ray of the bones involved revealed unmistakable, although not very marked, decalcification, compared to radiograms of the skeleton taken in 1941 (*cf.* Figs. 2, a and b and 3, a and b). Renal calculi could not be discovered.

Follow-up examination in October, 1942: For the first time the patient walked *freely with no support,* with his legs slightly apart. His general mobility, as a whole, had also been further improved. After an interval of many years, he was now taking up his professional work again.

Résumé: An advanced case of Bechterew's disease with all typical symptoms and x-ray manifestations, was improved by three implantations of thyrotoxic goiter, the effect of which could be followed up for and was still present after eleven months. For this rapid improvement, however, factors other than the decalcification (which only appeared after the lapse of eight months) had apparently to be held responsible.

Case 3. M. F., aged 27. Nine years previously the patient had for the first time felt pain in his legs, followed three years later by pain in his thighs. After another three years pain appeared in his cervical spine. He began to experience more difficulty in turning his head and in stooping down. His spine as a whole assumed a certain degree of stiffness with lordosis of the lumbar portion.

On admission the pat

tion was satisfactory. I

getting up from a h

bending his spine forward required some effort. All movements of the cervical spine and abduction of his thighs were reduced.

Roentgenologic findings: Typical spondylarthritis ankylopoetica of the cervical and lumbar spine; arthritic changes of the hip joints.

Chemical findings: blood sedimentation, 1 hr. 4 min.; urea, 21 mg. per cent; glucose, 87 mg. per cent; calcium, 11.8 mg. per cent; BMR +2; p_H 7; blood pictures, normal.

First implantation of thyrotoxic goiter on *April 27, 1942;* second implantation, *May 18, 1942.*

Since May 8 all movements of the head had become much less difficult, *May 26:* BMR, +18; *May 27:* The patient had lost 5 kg., but felt well; *June 12:* he walked with less effort. All movements of his head, which were greatly restricted, were now possible except for bending to one side. Abduction of the thighs was completely normal. Tachycardia (80-120) on exertion.

July, 1942: BMR +22; slight tachycardia; emaciation. Roentgenologically, no change.

October, 1942: Improvement continued. The atient informs us that for many years he has not had such a good summer as this one (1942).

Résumé: Moderately severe, typical case of Bechterew's disease. Definite improvement for seven months, but with no change in the x-ray appearance of the bones.

Apart from those cases in which operation was performed, two other moderately severe, typical cases of Bechterew's disease were given thyroidin internally. Temporary improvement was recorded during the period of medication. As soon as this was discontinued, all the original subjective symptoms reappeared, while the objective ones had never changed (x-rays). We abstain from giving the case histories here.

DISCUSSION

A new approach to the problem of effective treatment of spondylarthritis ankylopoetica is fully justified in view of the unsatisfactory results so far obtained by any therapeutic measure. Implantations of thyroid gland have repeatedly been tried (Crotti). Recent investigations and our own experiences show that greater safety is obtained when the donor and the recipient are of the same blood group. Additional administration of thyroidin or anterior pituitary lobe after the implantation is recommended in order to ensure the greatest measure of success.

After thyrotoxic goiter implantation the patients invariably developed slight thyrotoxic symptoms. The basal metabolic rate as well as the pulse rate was increased, the circulation time was reduced, and the patients lost weight. In no case, however, did these symptoms assume alarming proportions. Such a

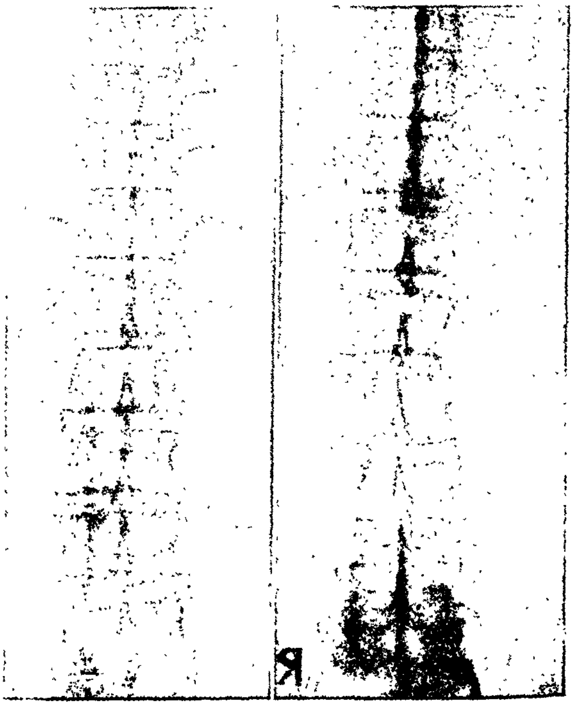

Fig. 2. (a) X-ray before operation, showing typical symptoms of Bechterew's disease, calcification of all small ligaments, bamboo-shaped spine, complete osseous communication between the posterior processus; (b) skeletal rarefication after operation revealing interrupted line of posterior spinal processus with clearly discernible intervertebral spaces.

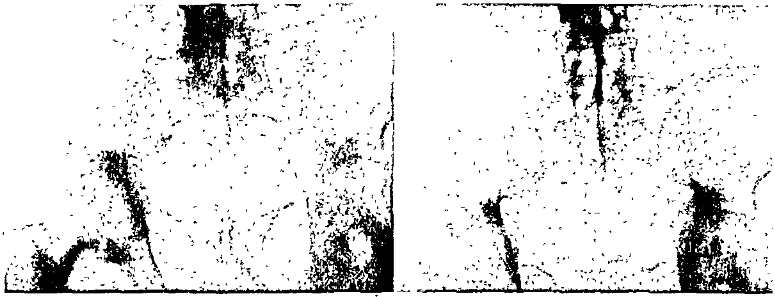

Fig. 3. (a) Pelvic skeleton prior to operation. (Note communication between transverse processus of th 5th lumbar vertebrae and ileum); (b) marked, patchy decalcification of the head of the right femur afte operation, with diminished calcification of the transverse process of the 5th lumbar vertebrae and clearl discernible intervertebral spaces.

condition may be remedied by immediate removal of the implant.

Rather strangely, in all our cases the *first indication of a beginning improvement* appeared very soon, probably owing to an increased thyroid function, which rapidly intensified the peripheral blood flow, thus favorably influencing muscular rigidity as well as pain.

The patho-physiological manifestations of thyroid hyperfunction which, naturally, also exist if this hyperfunction has been induced artificially, must probably be held responsible for the rapid improvement. Thus, the cardiac output is increased (Fullerton and Harlop, H. Zondek), the circulating blood volume, the velocity of the blood flow, the pulse rate, the pulse pressure, and the vital capacity are also increased, when the basal metabolic rate is high, in patients with hyperthyroidism, while the circulation time is decreased (Gibson and Harris, Blumgart, Gargil and Giligan, Stewart and Evans).

Stewart and Evans found that the peripheral blood flow in patients with hyperthyroidism was increased and that there is a linear relation between the basal metabolic rate and the peripheral blood flow.

Only in one of our three patients—and this a considerable time later—decalcification of the skeleton could be ascertained, *thus furnishing proof of th* correctness of the basic principle o which the method had originally been involved.

It is, therefore, actually possible through implantation of thyrotoxic material, to induce decalcification in th human skeleton.

Stress should, however, be laid upo the fact that spondylarthritis ankylopoetica is here by no means considere a "minus condition" of the thyroi gland, and no indications point to suc a possibility. We are, therefore, still i the dark as to the precise nature of th disease. The results of implantations a well as of internal thyroid therapy ar probably merely symptomatic.

Nevertheless, in none of our patient were we dealing with one of the famili remissions, but, on the contrary, wit an improvement of such a nature as ha not been achieved with any other therapeutic measure in those particular patients.

SUMMARY

Only unquestic [illegible] Bec[illegible]rew [illegible] with the typi [illegible] to [illegible] vanced stage, clinically as well as roentgenologically, were included in our investigations.

In two of three cases, implantations into the posterior rectus sheath of thyrotoxic goiter produced marked improvement. In one of them, moreover, decalcification of the skeleton was noted after eight months.

In two less severe cases, internal hormone therapy with thyroidin was given and both improved for the duration of the treatment.

The new method of treatment is merely considered a symptomatic measure. There is no indication of a possible relationship between spondylarthritis ankylopoetica and thyroid function. The effect probably occurs concurrently with increased basal metabolic rate.

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et par les rayons-x furent soumis à nos recherches.

Dans deux de trois cas, l'implantation de substance thyrotoxique de prévenance goiteuse dans la gaine postérieure du droit abdominal fut suivie d'une amélioration notable. Dans un de ces deux cas, on observa la décalcification du squelette huit mois après l'arrêt du traitement.

Dans deux cas moins advancés l'ingestion et de thyroidine fut durant le traitement accompagnée d'amélioration cette méthode de traitement n'est recommandée que comme procedure symptomatique.

Il n'y a aucune indication d'un rapport possible entre la spondylarthrite ankylopoëtique et les fonctions de la glande thyroide. Les effets probablement sont dus à une augmentation d'activité métabolique.

fut confirme par [illegible]

Выводы

Автор включает в свои наблюдения только те случаи Бехтеревской болезни диагноз которых не подлежит сомнению и которые показывают типичные клинические симптомы и рентгеновские знаки фазы болезни. В двух случаях имплантации части тиротоксического зоба в фацию мускули ректи дала хороший результат. В одном из них была отмеченка через восемь месяцев декалцификация скелета.

В двух более легких случаях лечение тироидином также дало хороший результат на протяжении срока лечения.

Этот новый метод нужно понимать только в смысле симптоматического лечения, ибо не существует какого-то ни было указания на связь между спондилартритис анкулопостика и функцией щитовидной железы. Возможно, что эффект происходит современно с повышением обмены веществ.

Sobre el Tratamiento de las Fracturas del Craneo en los Niños*

(Treatment of Fractures of the Skull in Children)

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SUMMARY

It is pointed out that fracture of the skull in children is an accident relatively benign and is followed under medical treatment by low mortality. The treatment differs according to the condition present—compound (open) or closed (simple) fractures. The first type represents a small minority, and must be treated in conformity with the rules of general surgery. In the second type, the treatment should be exclusively medical, except in cases of depressed fractures or with persistent hypertension of intracranial origin. In the exceptional cases requiring surgical intervention, the operation of choice is decompression trephining, unilateral or bilateral (Cushing).

EL ESTUDIO de ejemplares patológicos de extrema rareza, las investigaciones sobre enfermedades exóticas, la revelación de síntomas o lesiones, antes desapercibidas, que aclaran y afirman el diagnóstico; la nueva interpretación patogénica de una dolencia oscura y mal definida; y, sobre todo, el hallazgo de un agente etiológico desconocido; de una técnica original, de una arma terapéutica eficaz, son y, naturalmente, deben ser los temas favoritos de los artículos, de las tésis y de los trabajos que nutren los periódicos científicos y los anales de las conferencias médicas. Pero esa tendencia, justificada desde luego, impide, en ocasiones, que se vuelva la vista a viejos problemas que, por la incesante renovación de los conocimientos, por la modificación de las costumbres y los métodos de vida, recuperan su importancia y cobran caracteres de actualidad. Tal sucede con el extenso grupo de lesiones que hoy abarca la traumatología, como inevitable consecuencia de la difusión, quizás excesiva,

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de los deportes violentos y la generalización del trasporte motorizado. Con más, en nuestros dias, la brutal forma de guerra por medio de bombardeos aereos sobre pueblos y ciudades.

Tal ocurre, en primer término, con las infinitas variedades de fracturas y, en especial, con las fracturas del craneo, antes de escasa frecuencia, hoy de observación cotidiana. Y en este preciso grupo, sorprende la extensión y minuciosidad con que suele tratarse el capítulo de las fracturas del craneo, desde un punto de vista general, pero haciendo escasa o nula mención especial, de los aspectos peculiares que esta lesión presenta en los niños. Apenas si en la mayoría de los libros o artículos se hace hincapié sobre la edad de los accidentados, o la distinta frecuencia con que se observan determinadas localizaciones en los niños y los adultos.

Tales circunstancias y la convicción que me asiste de que diversos factores de órden anatómico y fisiológico, imprimen carácter proprio a las fracturas craneales en el niño, modificando, a su vez, la índole del diagnóstico, del pronóstico y del tratamiento, me han movido a tocar aquí este tema, desde un punto de vista clínico, refiriéndome a poco más de doscientos casos tratados en los últimos quince años, en mi servicio del Hospital "Dos de Mayo," en compañía de los Doctores Cárlos Prontzel y Abel Delgado. Ya en años pasados hice referencia al mismo asunto, con motivo de las "Jornadas Neuro-psicquiátricas "celebradas en Lima, ocasión en la cual comenté un número de accidentes inferior al que ahora consigno.

Al observar el número de casos cronológicamente, se destaca el aumento gradual, año por año, mucho más acentuado en los tiempos recientes, paralelamente al desarrollo del tráfico mecanizado. Y así, fueron ocho los casos anotados en el primer año de la serie y 29 en 1940.

La prioridad del tráfico urbano, como agente causal de los accidentes se refrenda en la clasificación que aparece enseguida:

Acc. de tráfico..........	129
Causas ignor.	37
Caídas	28
Armas contundentes	12
Total	206

En realidad es mayor la cifra atribuíble a los "accidentes de tráfico," pues los que se consignan en el grupo "causa ignorada," fueron niños conducidos al hospital por agentes de policía o familiares que no suministraron datos concretos, pues recojieron a los pequeños pacientes de la vía pública, abandonados allí, probablemente, por los causantes del atropello.

Con la denominación "caídas," se cuentan los que se precipitaron de algún edificio. En fin, aparecen los provocados por agentes vulnerantes, cantos de piedra, palos y otros objetos lanzados o esgrimidos en las riñas infantiles.

La edad de los accidentados oscila de 5 a 15 años, distribuída así:

Edad—	5	6	7	8	9	10	11	12	13	14	15
Casas—	12	15	21	28	31	13	19	17	11	18	23

Total 208

CONSIDERACIONES ANATOMO-PATOLÓGICAS

En las fracturas del craneo precisa considerar las lesiones del pericraneo, las del esqueleto, de las meninges y del encéfalo. Las cubiertas del craneo presentan por su abundante irrigación y la especial estructura del cuero cabelludo considerable propención a las hemorragias profusas, aún tratándose de heridas pequeñas, que no son fáciles de cohibir, y además la dificultad de realizar rápida y segura antisepsia por la presencia del cabello. Pero aparte estas circunstancias obviables con especiales precauciones, las heridas de esta zona se tratan como las demás de las cubiertas cutaneas, y no revisten gravedad por si mismas, sino en cuanto a la posible continuidad de la sepsis hacia el casquete oseo y por intermedio de él al contenido meningo-encefálico.

Las lesiones o óseas de la caja craneana se refieren a la bóveda, a la base o los dos segmentos al mismo tiempo. En épocas pasadas se creía que toda fractura de la base era simple irradiación de una fractura de la bóveda. Las investigaciones post-morten y los rutinarios exámenes radiográficos han demostrado, plenamente, que existen fracturas basales *sin lesión alguna de la bóveda*. Es interesante conocer la distribución de los casos que hemos observado según su localización.

Base	48
Bóveda	85
Irradidas de bóveda a base o vice versa......	37
Indeterminadas	38
Total	208

No es posible garantizar la exactitud matemática de esta distribución, ya que en muchas ocasiones es relativo el valor de los signos y síntomas de que se dispone para formular el diagnóstico, pero sí afirmamos, categóricamente, que en todos los casos hemos agotado los recursos clínicos, radiológicos y de aboratorio, para apreciar la localización con la mayor certeza posible.

Las estadísticas que conocemos de fracturas del craneo en los adultos, y en *aquellas que consignan todas* las edades, aparece siempre que las fracturas de la base, en relación con las demás localizaciones, se eleva al 60 por ciento. Como se vé, en nuestro cuadro esa proporción solo llega al 20 por ciento. El hecho es evidente y la mayoría de los autores lo consideran como tal, o sea que en los niños las fracturas de la base son mucho *menos frecuentes* que en el adulto. Los huesos, menos mineralizados, poseen mayor coeficiente de elasticidad; las suturas en esas épocas de la vida conservan su carácter membranoso; la columna vertebral menos ríjida, actúa de eficaz amortiguador. Tales las razones que se puede invocar como explicación a los hechos anotados. Debemos advertir que los casos que aparecen como "indeterminados," se refieren a pacientes que dentro de la apreciación clínica eran portadores de fractura del craneo, algunos de índole grave, pero sin que la radiografía y los demás medios de exploración permitieran señalar *una topografía precisa*.

La forma, distribución y extensión de las fracturas de la bóveda varía considerablemente. A veces son simples fisuras o hendiduras, el trayecto puede ser líneal o de aspecto ramoso; en ocasiones se reducen a disyunciones de las suturas, otras son esquirlosas o francamente conminutas. En algunos casos interesan la lámina externa, en otros la interna, en no pocos las dos. Recordemos que la interna o vitrea se fractura con más frecuencia que la externa, por razón de su más pequeño espesor y de su menor radio. Este hecho, como lo hemos de ver más adelante, reviste especial interés para los fines del tratamiento.

En la base la fractura comprende siempre todo el espesor del hueso. En opinión de algunos autores los trazos de fractura siguen una determinada sistematización, debido a la configuración propia de esta región del craneo. Desde luego, existen *zonas de mayor resistencia* y otras que la poseen menor. Las primeras son dos: una que parte de las apófisis orbitarias, si la línea de las alas menores del esfenoides, para terminar en la silla turca. La segunda, arranca de las apófisis mastoides y se dirije con el peñasco hacia adelante y adentro. Estas zonas de mayor resistencia limitan tres fosas: una anterior limitada hacia atrás por el borde posterior del ala menor del esfenoides; la segunda entre esta linea y el peñasco; la tercera, detrás del peñasco.

Las tres fosas así delimitadas, anteriores, medias y posteriores serían, pues, las zonas débiles, dentro de las cuales deberían hallarse el mayor número de fracturas. Mas, como dice el Dr. José Arce, "la hipótesis es sencilla y atrayente, pero por desgracia del examen del material anatómico de que disponemos, resulta que tal teoría no se puede comprobar en la mayoría de los casos." Sin duda es así, pues si bien en algunos casos se encuentra trazos de fractura dentro de las mencionadas fosas, no son menos aquellos en que descubren en pleno peñasco o en el macizo que se halla delante de la fosa anterior.

Otros factores poseen indiscutible acción en la longitud y dirección de las fracturas del craneo. Quienes han ejecutado numerosas trepanaciones, saben bien que no hay dos craneos iguales en cuanto al espesor de las láminas óseas o a su condición de esponjosa o ebúrnea y, finalmente, a la distribución o predominio de uno de esos elementos." Por tanto, esas variantes en el espesor y la estructura revisten caracter individual y mal pueden establecerse sobre ellas leyes generales de distribución de las líneas de fractura, ni menos determinar puntos y zonas, débiles o fuertes, de tipos precisos y constantes. De otro lado, es muy distinta la elasticidad del craneo en los niños y los adultos, lo que explica las diferencias que existen en las fracturas de unos y otros y, también, porque son más frecuentes las de base en los últimos que en los primeros.

Además, debemos tener en cuenta otros muchos factores, como la posición del accidentado, la consistencia y forma del agente vulnerante, el grado de violencia con que actúa, su densidad y su tamaño.

No dejaremos de mencionar una forma de fractura muy especial, llamada simétrica, que los ingleses denominan "large ring fractures and small ring fractures," que son grandes ó pequeños anillos, concéntricos al foramen magnum, que por ser algunas veces esquirlosas pueden herir el bulbo, por medio de un fragmento, y ocasionar la muerte violenta. En fin, se observan los trazos llamados sagitales, que comprenden las dos terceras o las tres cuartas partes del craneo, extendiéndose desde la bóveda a la base.

La mayoría de los autores consideran que las fracturas más frecuentes son las irradiadas de la bóveda a la base, luego las de la bóveda exclusivamente, y las menos frecuentes las de la base sin lesión de la bóveda. En nuestra estadística aparece que las menos frecuentes las puras de la base, pero la cifra mayor corresponde a las simples de la bóveda, y el segundo lugar en frecuencia a las irradidas de la bóveda a la base. Por lo demás, insistimos en la creencia de que la menor frecuencia de las últimas en los niños, depende de la mayor elasticidad del craneo en ellos, merced a las circunstancias anatómicas ya indicadas.

Las lesiones de las meninges varían al infinito, desde simples punturas, apenas perceptibles, hasta amplias y extensas desgarraduras, que suelen presentar formas muy diversas. Algunas veces los desgarros alcanzan los senos, y a través de ellos se realiza el paso de la sangre a la cavidad encefálica, y en veces permite, también, la salida de materia cerebral, es decir, la extracción cefálica. Las lesiones encefálicas, que ocurren en las fracturas del craneo son, por cierto, las de mayor significación, y todos los quadros sintomatológicos y clínicos, solo son reflejo de la intensidad, de la localización y extensión de esas lesiones.

Otras manifestaciones anatomo-patológicas que es indispensable mencionar son: el edema de la *sustancia blanca* o gris, más o menos extenso, las *hemorragias* de tipo uniforme, los grandes derrames sanguíneos, la comprensión o atrición, y las dilacerantes o destructivas.

Macroscópicamente el edema reviste el aspecto de una tumefacción cristalina que, a la incisión, resume abundante líquido céfalo raquídeo. Microscópicamente se observan ensachamientos de los espacios de Wirchow-Robin, así como de los intercelulares e interfibrilares, llegando hasta el aumento de las células ganglionares y neurológicas. Naturalmente la gravedad del edema cerebral depende de la extensión que abarca y, sobre todo, de su predominio en la sustancia gris de la corteza cerebral. En algunas ocasiones se localiza en los espacios aracnoideos y según su volumen puede determinar fenómenos de atrición de la masa cerebral.

Por muy diversas razones, la hemorragia es la lesión más grave y que dá lugar a mayores complicaciones. En las meninges como en el encéfalo, se presentan hemorragias que pueden ser simples extravasaciones puntiformes, algunas veces aisladas, otras confluentes formando focos hemorragicos, o llegar a constituir derrames de grandes proporciones, de origen venoso o arterial. Un gran derrame sanguíneo que se interpone entre el casquete óseo y la masa encéfálica, puede presionar a esta contra el foramen magnum y producir la muerte. Ocurren, igualmente, las hemorragias entre la dura madre y la aracnoides, o sea las llamadas intradurales; entre la aracnoides y la pía madre; finalmente, entre ésta y la sustancia cerebral. Las extradurales son producidas por la fractura del díploe o de los senos venosos, pero en especial por la efracción de la arteria meningea media o de sus ramas. Las subdurales proceden de vasos de la corteza y, principalamente, de los vasos piales. La sangre derramada en el espacia *arocnoideo* es la que tiñe el líquido céfalo-raquídeo, en diferentes grados.

CONSIDERACIONES ETIO-PATOGÉNICAS

Asunto sumamente debatido y que ha dado lugar a la enunciación de numerosas teorías, más o menos fundadas, pero sin llegar a comprobaciones satisfactorias y conluyentes, es el relativo al mecanismo de las fracturas. El Dr. José Arce, en compañía del Dr. Manuel Balano, presentó al Séptimo Congreso Argentino de Cirugía, un trabajo muy valioso, bien documentado, conteniendo valiosas y originales consideraciones de órden clínico y experimental, sobre los traumatismos de que nos ocupamos, y allí con extremada razón expresa: "que la experiencia solo ha servido para demostrar la banca-rota de todas esas teorías."

Un hecho elemental, por cierto, es que las fracturas se realizan unas por acción directa y otras, por acción indirecta. Respecto de las primeras, "se debe aceptar que la acción mecánica del trasumatismo pone en juego la elasticidad de la zona ósea contundida, agotada la cual se interrumpe la continuidad del hueso produciéndose la diéresis, o el hundimiento de una parte de la lámina, que puede ser la externa, la interne o ambas. a la vez. También se puede admitir que las fracturas conminutas se producen porque el cuerpo contundente no actúa sobre un punto, sino sobre una zona; pero, continúa siendo inexplicable, porque una fractura de la bóveda irradia hacia la base, siguiendo tal o cual dirección, y otra queda limitada a determinados espacios de una u otra región.

Menos comprensible es todavía el mecanismo de las fracturas indirectas, entre las cuales la más frecuente es el estallido de las bóvedas orbitarias, a consecuencia de un golpe recibido en la región posterior de la cabeza.

ESTUDIO CLÍNICO Y SINTOMATOLÓGICO

Es interesante [illegible] lo [illegible] dad de signos y síntomas que se observan y las diversas formas en que se agrupan, y de otro lado, la extraña discrepancia que existe entre los autores sobre su valor y significación. Sujetándose a su valor diagnóstico, los síntomas pueden clasificarse en síntomas de evidencia o patognomónicos, síntomas de probabilidad y síntomas de presunción. Cuéntanse entre los primeros la radiografía positiva, la visión directa de la fractura en caso de que esté complicada con herida, o que se haya comprobado en una intervención, y la pérdida de líquido céfalo-raquídeo o de sustancia cerebral. Entre los segundos la existencia de líquido céfalo-raquídeo hemorrágico; las epixtasis, otorragias y hemorragias faringeas. Los signos de presunción son la conmoción cerebral, las paralisis, convulsiones, reflejos anormales, delirio, incontinencias esfinterianas, vómitos, trastornos oculares, glicosuria, heridas de la cabeza, hematomas, crepitación.

Existe el mayor desacuerdo y a veces definida oposicón, sobre el valor de la radiografía en el diagnóstico de las fracturas del craneo. No son pocos los autores que le conceden escasísima importancia y otros que hasta la condenan, juzgándola sin valor y a un inconveniente por las incomodidades que implica su aplicación y por su costo elevado. No participamos de esas opiniones. Desde luego el mayor número de veces, casi en la totalidad, son precisas y reveladoras en las fracturas de la bóveda, las más frecuentes en los niños, y por tanto necesariamente tenemos que aceptar que en estas ocasiones constituye un medio de diagnóstico certero e inobjetable. De otro lado, el empleo de la radiografía ha proyectado evidente luz en la anatomía patológica de estos traumatismos, revelando la existencia de fracturas en numerosos casos en los que la clínica era impotente para formular un diagnóstico. Ha puesto en evidencia, igualmente, cómo era equivocada la primitiva opinión de que todas las fracturas de la base, era propagaciones de las fracturas de la bóveda. Además, aclara o facilita la interpretación de los hundimientos óseos. Finalmente, por medio de la iodoventriculografía permite, con certeza, localizar los hematomas subdurales y los de la cisterna magna, así como los abcesos cerebrales. En fin, en determinadas oportunidades, es un documento médicolegal muy valioso en los juicios provocados por accidentes. Por lo demás, nunca hemos lamentado agravaciones ni accidentes debidos a su aplicación.

La salida del líquido céfalo-raquídeo o de materia cerebral, a través de una herida o de los orificios naturales, es una prueba directa e irrefutable que, por lo mismo, no se presta a comentario alguno. La comprobación de líquido céfalo-raquídeo hemático no es síntomapatognomónico de fractura del craneo. Sin embargo, la gran frecuencia con que se asocian ambos hechos, significa que es un signo de gran probabilidad. Muchos observadores declaran la inutilidad de la punción lumbar, alegando, no sin fundamento, que la presencia de un líquido claro no excluye la posibilidad de la fractura; que su condición hemática, ni afirma la existencia de fractura ni mucho menos permite localizer la lesión; que su tensión alta o baja no corresponde a la hiper- o hipotensión intracranealla cual obedece a otras causas; y, finalmente. que su empleo no posee importancia terapéutica.

Sin embargo, dado que no siempre existen los signos de evidencia, y la frecuencia con que se observan casos oscuros e imprecisos, nos ha llevado a practicar la punción lumbar sistemáticamente, confiados en su inocuidad y porque en muchas ocasiones presta positivo auxilio a la elaboración del diagnóstico. Las otorragias algunas veces se deben a ruptura del tímpano, pero con mayor frecuencia son ocasionadas por la fractura del peñasco. Expistasis y faringorragias suelen ocurrir en lesiones de las fosas nasales y de la bóveda palatina, pero no son pocas las veces en que la causa es una fractura de la fosa anterior. Aisladas no poseen significación diagnóstica, pero si con otros fenómenos concomitantes que completan el cuadro.

El *signo más constante* en diversos grados de intensidad y duración, es la conmoción cerebral. Desde un punto de vista general, los traumatismos del craneo, como los que ocurren en las demás regiones del organismo, dan lugar á trastornos vasculares, diéresis, hemorragias y lesiones destructivas. Pero el hecho primordial de las nobles funciones que *corresponden al contenido encefálico*, y el hecho de que éste se halla encerrado dentro de una caja de pequeña o nula extensibilidad, provoca fenómenos peculiares, fisiopatológicos, que según una escala, generalmente aceptada, se denominan *conmoción, contusión y compresión*, manifestaciones alrededor de las cuales se producen los diferentes cuadros clínicos que corresponden a los accidentes que estudiamos.

La conmoción consiste, fundamentalmente, *en la pérdida de la conciencia*, durante breves instantes o algunos minutos, pero que una vez recobrada la lucidez, el paciente se encuentra en condiciones, aparentemente, perfectas. Esta última circunstancia ha originada la creencia muy difundida, de que la conmoción se debe, únicamente, a trastornos de órden funcional, sin lesión macroscópica ni microscópica de los centros nerviosos. Se dice que el golpe produce una acción inhibitoria de la célula nerviosa, sin lesión somática alguna y, por tanto, sin dejar huella o secuela alguna. En cambio muchísimos observadores e investigadores, sostienen el principio de que no puede producirse la conmoción, en cualquiera de sus grados, sin que haya lesiones materiales de mayor o menor entidad. Esta es la interpretación que tiende a imponerse en los últimos tiempos, y se acepta que cuando la reparación funcional es completa, real o aparentemente, se debe a que las lesiones encefálicas se han producido sobre zonas mudas. De otra manera siempre se observan manifestaciones sensoriales, sensitivas, motoras o síquicas.

Contusión cerebral se denomina a las diversas lesiones tales como equímosis, hematomas, hemorragias abiertas, eroeiones de mayor o menor extensión.

Si estas lesiones se lozaliza sobre zonas mudas, no se traducen por síntomas periféricos, pero si ocurren sobre zonas de funciones sistematizadas, dan lugar a fenómenos focales, simplemente irritativos, que se traducen por exitaciones, convulsiones, inhibitorias; o destructivas provocando paralisis, completas o incompletas. La compresión puede ser más o menos localizada, a veces general. Y se denomina *hipertensión intracraneana* o compresión intracraneana, a la resultante del aumento total del necéfalo, dentro de la caja ósea inextensible.

¿Cuales son las causas de este aumento de volumen total? En primer término, el *aumento de la cantidad de sangre* y de líquido céfalo-raquídeo. Enseguida al edema, que se produce a consecuencia de los traumatismos en todos los tejidos del organismo. La cantidad de sangre acrece porque el inmediato efecto del golpe es un espasmo vascular constrictivo, al cual sigue una vaso-dilatación más o menos duradera. En fin, se considera que el líquido céfalo-raquídeo aumenta a consecuencia de una hiperfunción secretora, en derminados plexos venosos, de donde pasa a los ventrículos laterales, enseguida al cuarto ventrículo y a los espasios aracnoideos.

Entre los *síntomas tardios*, de mayor importancia, mencionaremos la anosmia total o unil [illegible] los tras [illegible] visión, apreciables por el examen del fondo del ojo, los cuales tienen una significación diagnóstica de la más grande importancia. Menos significación presentan los trastornos correspondientes a otros nervios craneales, trastornos de la sensibilidad general, de la motricidad, de órden mental y de índole simpática.

CONSIDERACIONES TERAPÊUTICAS

El verdadero motivo inspirador de este pequeño trabajo, es la confusión que existe, al presente, por lo menos entre nosotros, sobre la conducta que debe seguirse frente a los casos de fracturas del craneo en los niños. Las tendencias más opuestas y radicales se presentan a nuestra consideración, desde los resueltos intervencionistas que aconsejan los métodos operatorios inmediatos, hasta los más recalcitrantes conservadores que sólo admiten la intervención quirúrgica casos excepcionales y raros, en los que además el resultado del tratamiento no es satisfactorio. No es posible trazar una línea de conducta única, invariable, absoluta, pero juzgado el problema globalmente, comprendiendo un gran número de casos, somos partidarios de la última tendencia, y por ello relatando más dos cientos casos con una mortalidad mínima, salimos al paso de los operadores sistemáticos, cuya cifra de decesos es hasta quince veces mayor que la nuestra.

Esquemáticamente revisaremos la línea de conducta que hemos seguido en el tratamiento de estas lesiones. En toda herida contusa del craneo, debe buscarse la existencia de una fisura o hendidura, y en caso afirmativo, si el paciente ofrece alguna manifestación de compresión, recordar que la lámina interna puede, también, hallarse fracturada. En tal caso debe recurrirse a la trepanación o, simplemente, levantar con el cincel la lámina externa y el diploe en busca de la lesión interna. Y en presencia de síntomas focales, a pesar de hallarse intacta la lámina externa, pensar en la frecuencia con que se rompe la vítrea, únicamente.

En ningun caso debemos limitarnos a ver una parte de la fractura, la que se encuentra comprendida entre los bordes de la herida, sino que se la debe ampliar y seguir el curso de la línea de fractura, porque muchas veces algo más lejos cambia de caracter y suele presentar esquirlas o depresiones, lejos de la diéresis de las partes blandas. Bien entendido que la extirpación de las fragmentos superficiales y sobre todo la esquirlectomía profunda o la extracción de toda la parte hundida, requiere práctica especial y la más rigurosa técnica quirúrgica. Aquí debemos llamar la atención sobre una práctica inconveniente y casi universalmente aconsejada, y es la irrigación de las fosas nasales o de los conductos auditivos, en los casos de epixtasis u otorragias, con el supuesto propósito de desinfectar dichas cavidades e impedir las contaminaciones profundas. Esta costumbre favorece, en vez de evitar, las infecciones de la cavidad craneal. La sangre extravasada sirve, admirablemente, de tapón protector, y los lavados que remueven esa sangre, se convierten en los vectores de los numerosos gérmenes que llenan dichas cavidades. El deber es, pues, respetar esa barrera natural, limitandose a colocar en los orificios de salida una simple torunda de algodón.

Para orientar el tratamiento, por lo menos en sus lineamientos generales, podemos establecer una división de los casos en benignos y graves. En los primeros, que no presentan signos severos de compresión, local o general, sin manifestaciones septicas, no es discutible siquiera el tratamiento médico y de espectación, sobre la base del reposo absoluto, procurado por el empleo de sedantes y el asilamiento del enfermo para sustraerlos a los estímulos exteriores. Alimentación moderada y pequeña ingestión de líquidos. Catarsis discreta y suero hipertónico.

En los casos graves los síntomas que mejor pueden guiar al práctico, en la apreciación de las posibles lesiones, su extensión e intensidad, son los que expresan el grado de compresión, local o general y la hipertensión intracraneal. En el grupo de los casos benignos, cuando existe un buen estado general y los síntomas focales, de excitación o de parálisis, son moderados y poco profundos, es impositivo limitarse al *tratamiento* médico exclusivo. Si los síntomas en vez de amenguar o disiparse se acentúan y el estado general se torna alarmante, lo más importante es determinar si se trata de una hemorragia extradural o subdural, porque en tales circunstancias la *intervención es el tratamiento salvador.*

El mayor de los peligros es, sin duda, la hipertensión intracraneana. Y como ella se debe, aparte el edema al aumento del volumen de sangre y de líquido céfalo-raquídeo, así como de la presión arterial, era lógico el tratamiento que desde épocas pasadas se prescribía en estos casos, o sea la quietud, la catarsis, la diuresis y estricta dieta alimenticia con empleo muy escaso de líquidos.

Aún cuando hemos concedido un papel importante a la punción lumbar, como auxiliar diagnóstico, no la consideramos un agente terapeutico de valía. En efecto, es sabido que la presión del líquido céfalo-raquídeo, es independiente en su causa y mecanismo del hipertensión total intracraneana, y por tanto, la extracción del mencionado líquido no disminuye la hipertensión total. La clínica, por lo demás, demuestra este acerto.

Si a pesar de las medidas indicadas y de una prudente espera, que debe prolongarse hasta donde sea posible, en un caso de fractura del craneo cerrada, el estado general se vuelve alarmante, el paciente ofrece tendencia al coma o no sale de él, y presenta pupilas dilatadas, con pulso bradicárdico exajerado o al contrario muy frecuente, debemos pensar que estos fenómenos de hipertensión cerebral se deben a un gran hematoma, o al bloqueo en determinado lugar del sistema ventricular dentro del cual circula el líquido céfalo-raquídeo. En veces, la localización de las lesiones puede ser determinada por la iodo-ventriculografía. Este es un caso en que puede justificarse la intervención, y en tal emergencia, la operación elegible es la *trepanación sub-temporal* de Cushing.

He aquí ahora los resultados obtenidos en el tratamiento de los 208 casos de fracturas de craneo en niños, que han sido materia de estas lijeras consideraciones.

Tratamiento médico	173
Esquirlectomía y plastías........	11
Desinfección quirúrgica, sutura de partes blandas con ó sin drenaja	19
Trepanación	5
Total	208
Curados	203
Fallecidos	5
Total	208

Dos de los cinco fallecidos sufrieron la trepanación sub-temporal. Uno falleció a las 6 horas de ingresar al hospital, en estado agónico. Otro sucumbió con signos meningo-encefálicos a los siete días de ingresar. El último fué víctima de un abceso cerebral y pereció a los 60 dias.

SUMARIO

La fractura del craneo en los niños es un accidente relativamente benigno y que produce, bajo el tratamiento médico, escasa mortalidad. El tratamiento difiere según se trate de fracturas abiertas o expuestas, o de facturas cerradas. En las primeras, que representan una pequeña minoría, el [illegible]am[illegible] debe seguir las reglas [illegible] ogía

general. En las segundas, salvo el caso de hundimientos óseos, o de irreductible hipertensión craneana, el tratamiento debe ser exclusivamente médico. En los casos excepcionales de intervención quirúrgica, la operación de elección es la trepanación uni- ó bilateral de Cushing.

RÉSUMÉ

La fracture du crâne chez l'enfant est un accident relativament bénin et avec un traitement approprié á une mortalité très basse. Le traitement varie selon la *nature de la fracture*—fracture ouverte ou fracture fermée. Les fractures ouvertes ne sont pas fréquentes et exigent un traitement conforme aux règles de la chirurgie générale. Dans les fractures fermées le traitement est exclusivement médical excepté dans les cas de fractures déprimées ou dans celles qui sont accompagnées d'hypertension persistante d'origine intracrâniale. Dans les cas exceptionnels qui necessitent une intervention chirurgicale l'opération de choix est le trépanage décompressif, unilateral ou bilatéral.

Выводы

Переломы в детском возрасте сравнительно безопасны и сопровождаются незначительной смертностью при консерванивном лечении. При открытых переломах нужно придерживатся общих хирургических правил. *Закрытые переломы* лечатсч только консервативно, за исключением случаев депрессии осколков или настойчивой гипертензии внутри-черепного происхождения. В исключительных случаях требующих хирургическое вмешательство, операция выбора *односторонная* или двухсторонная трепанация.

The Use of Living Fascia in the Repair of Hernias

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SINCE 1913 I have performed 1424 operations for all types of hernia, an average of 49 operations a year. The hernias included inguinal, direct and indirect, femoral, epigastric, incisional, umbilical and diaphragmatic. The types of operation were the Bassini, Gallie, Ferguson, McArthur, Halsted and a modified Bassini-Gallie operation. The latter is a term that designates a technic to be described later. Materials commonly used for these operations are catgut, ribbon gut, silk, wire, cotton, nylon, homologous and heterologous fascia. Wire, cotton and nylon have been the only sutures omitted by me in these operations.

Now and again I have used silk, but because of numerous infections resulting from the presence of a foreign body, I have abandoned it. Fistulas following the use of silk present a difficult situation, since the sinuses will remain open until the last strand of silk has been ejected or removed by the surgeon. Hence I have given up the use of any foreign material as a suture or ligature for any type of operation employed for the repair of a hernia. Cambassis[1] and others also find that silk and linen have a tendency to cause suppuration.

FASCIA

This paper will deal particularly with the use of fascia in hernia operations. Prompted by the desire to obtain better results and thereby lessen recurrences, I began to employ fascia rather intensively for the repair of hernias about ten years ago. Its principles had been propounded by Gallie.[2] In an excellent paper Williamson[3] dilated on its virtues. It seemed logical then, as it does now, that an homologous fascia would facilitate healing of the joined structures. The fascia is either obtained from fascia lata, or, following the technic of McArthur, in continuity from the fascia of the external oblique. Heterologous fascia may be substituted for fascia lata. However, infection results more frequently with the use of ox fascia. When not enough fascia lata is obtainable one may also combine heterologous and homologous fascia. Ribbon gut too has been utilized as an auxiliary suture with these two materials in a few of our cases.

Fascia is practicable in patients of all ages from puberty up to the age of 74. Its use is unnecessary in children, who heal effectively by first intention. While the same claim has been made for *some* women patients, we have found it, nevertheless, in *all* types of hernias which occur in women. However, the fascia method is never used for the repair of strangulated hernias. When a hernia is strangulated, there may be infection present, depending on the duration of the condition. Many of these patients are too sick to add a technic which would prolong the time of operation. It is obviously contraindicated when the viability of the bowel is in question.

REVIEW OF THE LITERATURE

Gallie[2] believed that failures with fascia are due to technical errors such as suppuration and insecure anchorage at the beginning and end of the stitch, resulting in infection with attendant disintegration of fascia. The same may be said, however, in the use of all types of sutures mentioned.

McLaughlin[4] reported 90 cases operated on by the McArthur technic. He also used this method in recurrences. There were no recurrences in this series, but too short a time had elapsed since operation to permit final conclusions.

W. L. Estes, Jr.,[5] employed the rectus sheath, uniting it to the fascia opposite, with transplantation of the cord. Recurrences were reduced in indirect and direct hernias. (0.4 and 2.77 per cent respectively). Foss and Guthrie, however, believed that cotton could be safely employed wherever fascia was used. Koontz too abandoned the use of fascia because it does not add any particular strength to the Bassini operation. Robius reported no recurrences in his use of fascia. Halsted, Bloodgood and Downes discarded the use of the rectus sheath. Gosset sewed two strips of fascia together using two needles threaded at the ends. On the other hand, Burdick[6] claimed that recurrences are more frequent with the use of fascia but advocated its use in large abdominal hernias only. He spoke favorably of Wangensteen's pedicled flap method, preferring silk because he found that the incidence of infection was lower than that of catgut. At reoperation Burdick[7] stated that little evidence of fascia was noted in cases where it had been used as a suture. Swinton and Schwalm[8] of the Lahey Clinic advocated the use of the fascial repair of hernias in all recurrent and direct hernias. They claimed that recurrences in the latter could be greatly reduced. Smith and Masson[9] felt that all recurr[illegible] hernias [illegible] cr[illegible] with f[illegible] eported twelve ventral hernias oper- ted on previously from one to five imes.

Fleming[10] laid particular stress on the fficacy of the transversalis fascia. Cul- igan[11] stressed the value of the Mc- rthur method of repair. In the great ıajority of cases of indirect hernia he tated that one strip is often sufficient. he rest of the repair can be completed ith catgut. He felt that infection is ore common using the Gallie method han the McArthur technic. In 69 re- lies out of 106 cases (McArthur) there as a recurrence of 8.6 per cent whereas 8 replies to catgut technic gave 29.6 er cent recurrences. Culligan also ombined the McArthur method with he "white fascia" derived from the nterio-posterior aspect of the trans- erse abdominal muscles.

Iason[12] described a technic especially seful in sliding hernias. A wide strip f the fascia lata is brought up subcu- aneously and insinuated through two ongitudinal slits of the inguinal liga- ent to which it is attached by a No. 1 hromic catgut suture. The repair is hen continued with fascia after it is nchored with catgut.

Joyce[13] used a combination and modi- ication of the Halsted method of trans- lantation of the cord, the Andrews im- rication method and a combination of IcArthur's and Gallie's technic. When here was not sufficient fascia obtained y McArthur's method, he did not hesi- ate to use fascia lata. His results have een excellent with few recurrences and nfections.

Robins[14] advocated the use of the Mc- rthur technic. He felt that the cause f recurrence was a muscular deficiency. abcock was credited with calling atten- ion to the thick ligamental covering of he pubic bone to which the first stitch s attached.

McCloskey and Lehman[15] repaired large inguinal hernias by the McArtl technic. They used one strip, first pass through the conjoined tendon and tl through the reflected portion of P part's ligament. The suture then pass back and forth through the inter oblique and transversalis fascia to t shelving edge of Poupart's ligame Each loop of fascia was fixed with linen or silk suture, and the exter oblique aponeurosis sutured under t cord.

Williamson[3] believed the Gallie op ation gave appreciably better resu than any other, especially in adul Recurrences were placed at 1.3 per ce for indirect and 8.3 per cent for dir hernias. He too stressed the inadequa of the existing follow-up of cases. Pilcher[16] used the plantaris tendon as graft, and has fully described the tec nic. Hawes[17] believed that ribbon gut as efficacious as any other method repair. Several years ago I used ribb gut exclusively. It is an excellent sutu material.

Gould[18] advocated an open operatio requiring an intricate technic, to obta a strip of fascia 9 inches long and 1 in wide. He called his method "patchi the darned hole," and claimed less r currences with this technic than wi Gallie's. W. Gray placed the fasci stitch behind the cord cautioning that r gap should be left between the edge the rectus sheath and the pubic cres Jolly believed fascia sutures to be in portant in obese subjects, as well cases of direct hernia and recurre hernias. Austin[19] stated that aut genous fascial sutures are superior any foreign material suture. He re ommended very highly the autologo sutures in the repair of femoral hernia He did not believe the method pre-di poses to infection.

TYPES OF HERNIA

Many feel that the use of fascia i

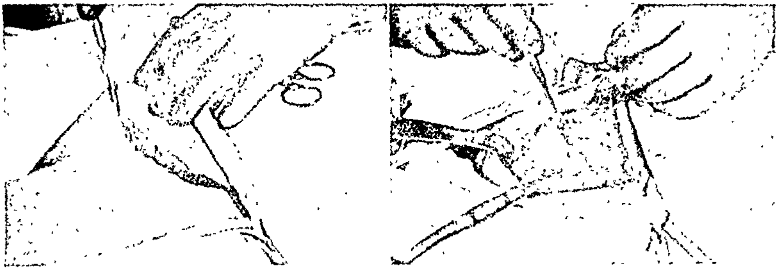

Fig. 1. A. The incision for femoral hernia is made with the convexity caudad. B. The sac of the femoral hernia below Poupart's ligament.

unnecessary in the repair of an indirect inguinal hernia. This may be true in the small hernia, but when one encounters the enormous scrotal hernia in men, or the equally large vulvar hernia in women, there is really need for a stronger and more lasting material than catgut. In this opinion Foster concurs.

Curiously enough recurrences are frequent in femoral hernia, especially when the closure of the canal is obtained solely with an operation below Poupart's ligament. When the canal is closed above and below Poupart's ligament by means of fascia, less danger from recurrence is encountered. If a curved linear incision is made with the convexity downwards, the skin is dissected up so that the femoral protrusion and the inguinal region are exposed. (Fig. 1A) The sac is dissected from below upwards, the fascia of the external oblique muscles is incised where the upper portion of the sac is isolated. (Figs. 1B and 2A) After removal of the sac, the fascia is then placed at the entrance and exit of the femoral canal. (Figs. 2B and 3A)

Epigastric, incisional and umbilical hernias can be considered in the same category because the principle of closure is the same. Here fascia serves a useful purpose especially in incisional hernias which follow in almost every instance as a result of infection. Since there is more or less loss of abdominal

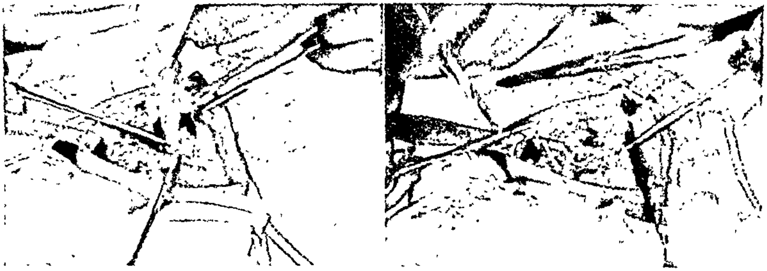

Fig. 2. A. The complete sac of the femoral hernia is isolated a fascial stitch is inserted at the outlet of the femoral canal.

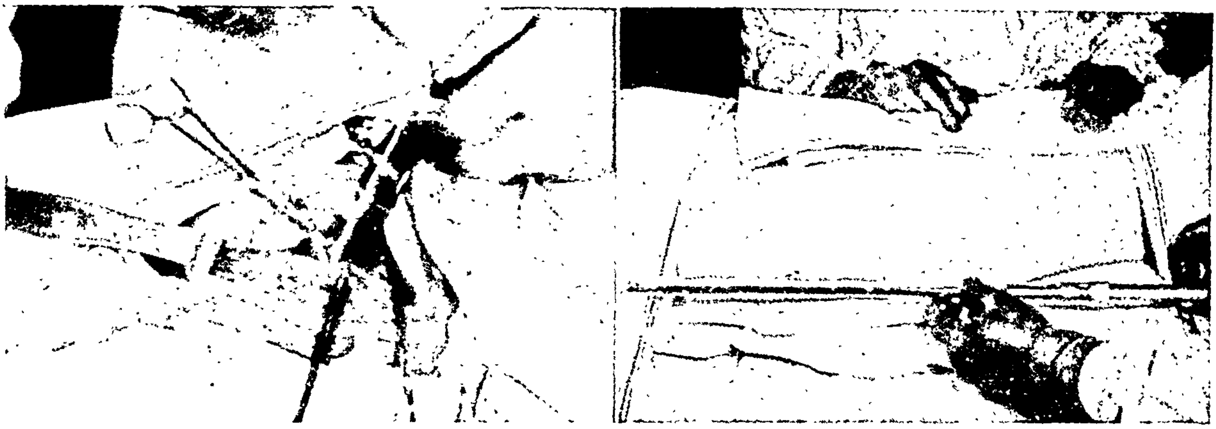

Fig. 3. A. The second fascial stitch is placed at the entrance of the femoral canal above Poupart's ligament. B. Illustrating Masson stripper and thigh from which strip is taken.

fascia, depending on the severity of the infection, the use of fascia as a suture material is of great value. In one recent case of incisional hernia I used eight strips of fascia. It was probably the largest number in my experience, the ncision extending from the epigastric the suprapubic regions. The patient de a good recovery. The use of a eet of fascia has not been as successful in my hands as strips obtained from the fascia lata.

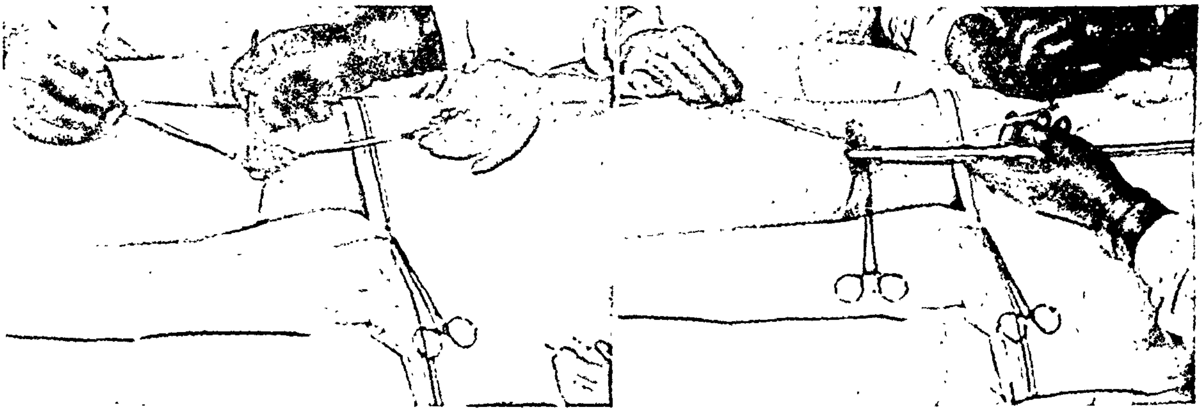

Fig. 4. A. Incision is made just above knee joint. Strip of fascia is dissected out on the handle of the knife. B. After the strip of fascia is cut with the Masson stripper, a piece 7 to 8 inches long emerges.

TECHNIC

It seems then that an homologous fascia would facilitate healing of the joined structures.

Coincident with the operation for the repair of the hernia, the leg opposite the hernia is prepared from the crest of the ileum to below the knee. (Fig. 3B) A two-inch incision vertical to the long axis of the thigh is made on the lateral side of the thigh over the insertion of the fascia lata. (Fig. 4A) A half-inch incision is made across the fascial fibers, and a strip is "started" by making two incisions at right angles to this cut in the direction of the fibers. Subcutaneous fat is cleaned off the fascia, which is picked up in a thumb forceps and freed from the underlying tissues by blunt dissection with the knife handle. The mobilized end is grasped in a Kelly hemostat and the strip cut using the Masson fascia stripper. (Fig. 4B) This stripper is preferred because only a single incision is required to obtain the strip. The fascia is then cut into sutures of the desired widths. Enough material for from two to four sutures can be easily obtained. They are kept in a solution of normal saline until ready for use. The number of strips to be used depends on the size of the hernia. The long incision on the outer side of the thigh to obtain fascia lata mentioned by Cambassis has been discarded. The large Gallie needle has been relegated to the past because it was responsible for some recurrences. These needles are too broad and their edges are sharp leaving large suture holes. The needle used by Stuart Harrington[20] is the best type for fascial sutures. It is small, with rounded surfaces which do not cut tissues.

The structures through which the needles must pass in the repair of the hernia have been debated by many authorities. It has been stated that a muscle to fascia stitch is illogical. Advocates of the repair operation which includes the transversalis fascia have probably no dissenters to this part of the technic. Most surgeons are agreed that fascia must be joined to fascia to obtain permanent results. Granted this be true, then the employment of sutures of fascia lata joining the reduplicated edge of the external oblique to the shelving margin of Poupart's ligament would help to prevent recurrences.

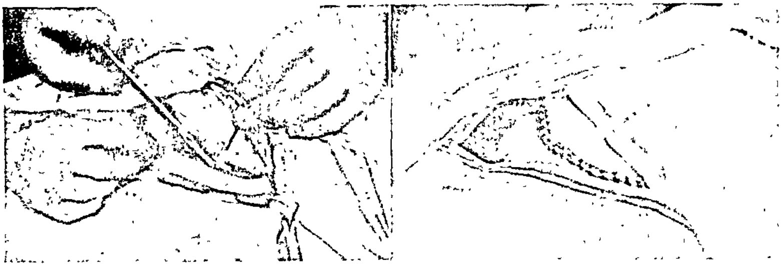

Fig. 5. A. Fine 00 catgut suture uniting Scarpa's fascia. This stitch prevents secondary collections. B. Clips to the skin

THE MODIFIED BASSINI-GALLIE OPERATION

The fascial stitch used in the modified Gallie-Bassini operation[21] is a continuous one. The number of layers of stitches used depends upon the size of the hernia. In an ordinary inguinal hernia usually two layers of sutures are employed. It is important to insert the needle so that the first stitch includes the fascia and periosteum covering the pubic bone. This suture is continued in the direction of the anterior superior spine. When it reaches the point where the cord dips down to enter the abdomen, the suture is used in a circumferential manner without choking the cord. The second suture joins the free borders of the fascia of the external oblique. The free end of the suture is anchored *in situ* with a single 0 chromic catgut stitch. Except in the Ferguson technic the cord is placed under the superficial fascia. It is obvious that with the fascia under the cord, a stronger and more permanent repair will result. A suture of 00 plain catgut is then placed in Scarpa's fascia (Fig. 5A), joining the edges of the deep layer of the superficial fascia. This eliminates the dead space below the skin. Clips are applied to the skin (Fig. 5B).

COMPLICATIONS

It is a well-known fact that hernias are more easily infected than any other type of abdominal operation. Probably one of the greatest preventive measures of infection in hernias is the elimination of dead spaces and perfect hemostasis. Should infection occur after the use of fascia, the wound heals much more slowly than those in which catgut sutures have been employed, but the danger of recurrence is not nearly so great as with the use of other suture material. It must be borne in mind that to prevent recurrences the fascial stitch must be properly anchored at the beginning and end of the suture (Gallie). gain dead spaces allow the accumulaon of serum and blood which predispose to infection. To prevent this, it is necessary to have tissues intimately apposed. A most important stitch is one of fine 00 catgut uniting the deep layer of the superficial fascia (Scarpa's fascia). Recurrences are often due to the failure of the surgeon to remove the hernial sac. Twisting and transfixion of the sac high up under the muscles is an important aid in preventing recurrence.

To prevent atrophy of the testicle, the sutures should not constrict the cord. In addition the nerve supply and the vas deferens must not be destroyed, an accident many surgeons have encountered as an unfortunate complication. However, if the vas deferens has been cut across, an immediate end to end anastomosis should be performed. A swedged on suture of silk on a straight or curved needle employed in the suture of blood vessels is used for the anastomosis. The sutures are placed in a circular manner without entering the lumen of the vas deferens. Some surgeons refuse to do a simultaneous bilateral repair because cases of bilateral atrophy of the testical have been reported. I have never refused to do a simultaneous bilateral repair of a hernia. I have one case, however, in whom atrophy of the testicle occurred on one side. Collectively I have records of at least four cases of atrophy of the testicle in the total number of operations performed for hernia.

STATISTICS AND FOLLOW-UP

Every patient operated on in our service is asked to return within a year after operation. It is a most difficult problem to follow ward cases. In the past two years we have endeavored, with only scant success, to interview every case in which fascia was used. Out of 275 return postal cards sent with questionnaire attached, 100 were returned. Of these, six had recurrences, one was a direct inguinal hernia, four were indirect inguinal hernias and one was a femoral hernia. Recurrences occurred only in those who were infected. Curiously enough, in bilateral hernias there is considerable danger of one side becoming infected. On account of the greater liability for hernias to become infected after operation I now use from 2 to 4 gm. of sulfanilamide in the wound. It is still too soon to report the results. A huge scrotal hernia in a patient 65 years of age became infected. The primary condition promptly returned. This patient was operated on for a recurrence. Femoral hernias are now operated on above and below the inguinal ligament. In other words, fascia is placed at the entrance and exit of the femoral canal. We have had no recurrences since using this technic. Following two or more operations there may be present a weakness of the inguinal incision without the formation of a sac. We have observed this in two patients.

CONCLUSIONS

1. The desire to prevent recurrences after the operation for hernia has led to the employment of many methods since Bassini first propounded his technic.

2. A review of the literature has been appended.

3. All kinds of suture materials have been advocated with proponents for each type.

4. Fascia lata has given fewer recurrences than catgut. It is believed that foreign body sutures are more apt to become infected than homologous sutures.

5. Complications of the operation have been considered.

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RÉSUMÉ

Les avantages des différents matériels du suture employés dans les opérations pour hernies sont indiqués.

Une revue de la littérature de l'emploi de fascia vivant dans les opérations pour hernies nous est donnée par l'auteur. Une technique est décrite. L'auteur donne sa préférence à une modification de l'opération de Bassini-Gallie. D'après lui, l'emploi du fascia lata est suivi de moins de récidives que l'emploi du catgut. Il exprime aussi l'opinion que l'emploi de sutures de provenance étrangère est plus apte d'être suivi d'infection que l'emploi de sutures homologues.

Les complications opératoires sont discutées.

SUMARIO

El autor llama la atención a las ventajas de todas las variedades de suturas empleadas en la reparación de hernias.

Hace una revista de la literatura con respecto al uso de fascia-viva para la sutura de hernias, detallando la técnica. El autor prefiere la modificación Bassini-Gallie y en conclusión mantiene que la fascia-lata da mejores resultados que el catgut, y que las suturas de origen extraño son más susceptibles a la infección que las suturas homogeneas.

Las complicaciones de la operación son enumeradas.

Выводы

Автор указывает на преимущество всевозможных шовных материалов при операциях грыжи. Он просматривает литературные данные по вопросу употребления живущей фасции и описывает технику ее употребления. Автор предпочитает
модификацию операции Б Г
Разбираются та
осложенения.
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Fractional Dosage in Spinal Anesthesia

JOSÉ DELORME, M.D.
BUENOS AIRES, ARGENTINA

THE attention of surgeons and anesthetists has always been called to a group of patients who present a peculiar resistance to spinal anesthesia, be it of the spinal, inhalation, rectal or intravenous type. Intra- or extradural analgesia was found inadequate in certain cases, and in others it had no effect at all. If rectal anesthesia was used, the basal anesthetic was insufficient. In inhalation anesthesia, in some cases of abdominal surgery, besides the large quantities of anesthesia used, muscular contractures were often difficult to overcome. The same was true when other methods were used.

In an attempt to ascertain why some patients respond readily to the anesthetic, while other patients under the same conditions and with the same technic offered marked resistance, we directed our efforts to finding the underlying cause and solution of the problem.

As the result of observation and study of a great number of patients I reached the conclusion that these anesthesia-resistant patients belonged to the group of sympathycotonics. This group presented a special resistance to spinal anesthesia, the failure of the anesthetic varying from 5 to 7 per cent. I am referring to the results obtained by competent surgeons, eliminating cases of faulty technic or the use of ineffective anesthetic salts.

Nearly three years ago Dr. Pasman, unacquainted with Sebrechts,[1] work, devised a procedure that motivated this study. This procedure, while designed for the anesthesia-resistant patients, may be used in other cases. The technic follows: The patient, to whom the position is previously explained, lies in lateral decubitus, a picture of the correct position being shown him, if necessary. Well trained assistants support the patient, his head being slightly raised and placed on a pillow, the table being horizontal. The operation is delayed until a convenient position is ascertained in order to facilitate the spinal puncture.

We use Querella percaine dissolved in from 6 to 8 cc. of spinal fluid. The solution injected is practically isobaric. Diffusion will not be effected by gravity, but in relation to the force of the injection and the spinal fluid pressure. Thus it makes no difference on which side the patient lies. A large aseptic field is obtained by the use of iodine, and touching of the thus disinfected skin is scrupulously avoided during the operative procedure. The iodine must be allowed to dry completely to prevent passing through an insufficiently disinfected dermis even the smallest quantity of iodine on the tip of the needle, which would act as an irritant to the meninges.

These apparently minor details are of great importance in achieving perfect results. Our experiences have demonstrated that the scrupulous observance of these rules is responsible for our encouraging results. The patient is warned that he will perceive a slight prick, this to avoid sudden movements. With a small needle a dermal wheal is produced by injecting deep into the cellular tissues adrenalined novocaine. The needle is changed for one of larger caliber through which 2-3 cc. of the same solution are injected into the interspinal space, which will serve, as Sebrechts points out, to indicate the direction through which the spinal needle will travel. This needle enters at the level of the fourth lumbar interspace when anesthesia is needed for the lower abdomen, and at the level of the second interspace when anesthesia in the upper abdomen is aimed at. We always make the injection below the conus medullaris, the anesthesia, therefore, being radicular and not medullary.

In obese patients we use the procedure advocated by Maxon,[2] which consists in effecting local anesthesia of an area comprising 2 or 3 vertebrae; since palpation of the spin apophysis is next to impossible in these individuals, the tip of the needle will find its way in the right direction. The injection of a local anesthetic before puncture makes the latter a completely painless procedure, which will establish the confidence of the patient in the method. The puncture needle must be thin, with a short bevel and used for this purpose only. It is returned after being used. The box, the syringes and the needles are employed only to perform the anesthesia and for no other purpose.

The needle is introduced with the stylet on until it reaches the ligamentum flavum; at this point the stylet is withdrawn. The "drop sign" of Alberto Gutierrez[3] is of great value. This procedure offers two advantages: First, the surgeon is assured that the needle has reached the peridural space and that by inserting the needle a few more millimeters, it will find the proper site. Second, it permits the anesthetist to perform without difficulty and under all circumstances the peridural anesthesia of Pagés Dogliotti. Once the flow of the cerebro-spinal fluid has begun, the syringe is immediately connected, trying not to lose a single drop, except when high anesthesia is desired, and where the tension of the fluid appears to be too high. In such cases we permit from 20 to 30 drops to escape in order to allow a greater diffusion.

The amount of the percaine injected varies according to the following factors, an exact evaluation of which is gained only through experience: (a) the degree of desired anesthesia; (b) the tension of the cerebro-spinal fluid; (c) the general condition of the patient; (d) the neurovegetative tone of the patient. Example 1: patient in poor condition, vagotonic; operation on lower abdomen indicated; 0.004 mg. of percaine diluted in 3 cc. of cerebro-spinal fluid injected. Example 2: patient in good condition, sympathycotonic, surgery of the upper abdomen indicated; percaine 0.008 in 7 cc. of cerebro-spinal fluid injected. The minimum dose estimated as adequate is always resorted to.

The injection is made slowly, in order to bathe only the posterior roots in the anesthetic fluid, excluding as far as possible the anterior nerve roots where the fibers of the ortosympathetic run. As soon as the injection is completed, the syringe is withdrawn, leaving the needle in position, and the stylet is replaced. One should wait from 5 to 10 minutes and ascertain the level of the anesthesia by pinching the skin with some instrument. When the required level has been obtained, the needle is withdrawn. An intramuscular injection of 0.25 ctg. of efetonine is now made. In the rest of the cases, that is, in the 5 to 7 per cent of the before the storm.

6. Thyrotoxicosis is to be considered essentially a chronic disease.[4] The only time the disease is entirely acute is when it becomes suddenly established and death occurs, or a cure is produced before chronicity has time to be established. Too often an acute exacerbation of a chronic process is termed acute hyperthyroidism.
7. Symptoms of hyperthyroidism and hypothyroidism can be, and often are, present in the same individual at the same time.[5] We too frequently look for a full-blown picture of one with an entire absence of the other. The typical textbook picture is rare in comparison to the cases that are atypical; and often, as stated, fairly typical pictures of both diseases are present at the same time.
8. Removal of a goiter for prophylactic reasons against severe thyrotoxicosis, malignancies, chronic inflammation and, of course, eventual heart disease, has much to commend it as a logical and effective surgical procedure.
9. It is almost the universal opinion that surgery is the treatment of choice in thyrotoxicosis.[6]
10. Each thyroid gland that is not normal, i.e., abnormally enlarged, leads to degenerative changes.[7]

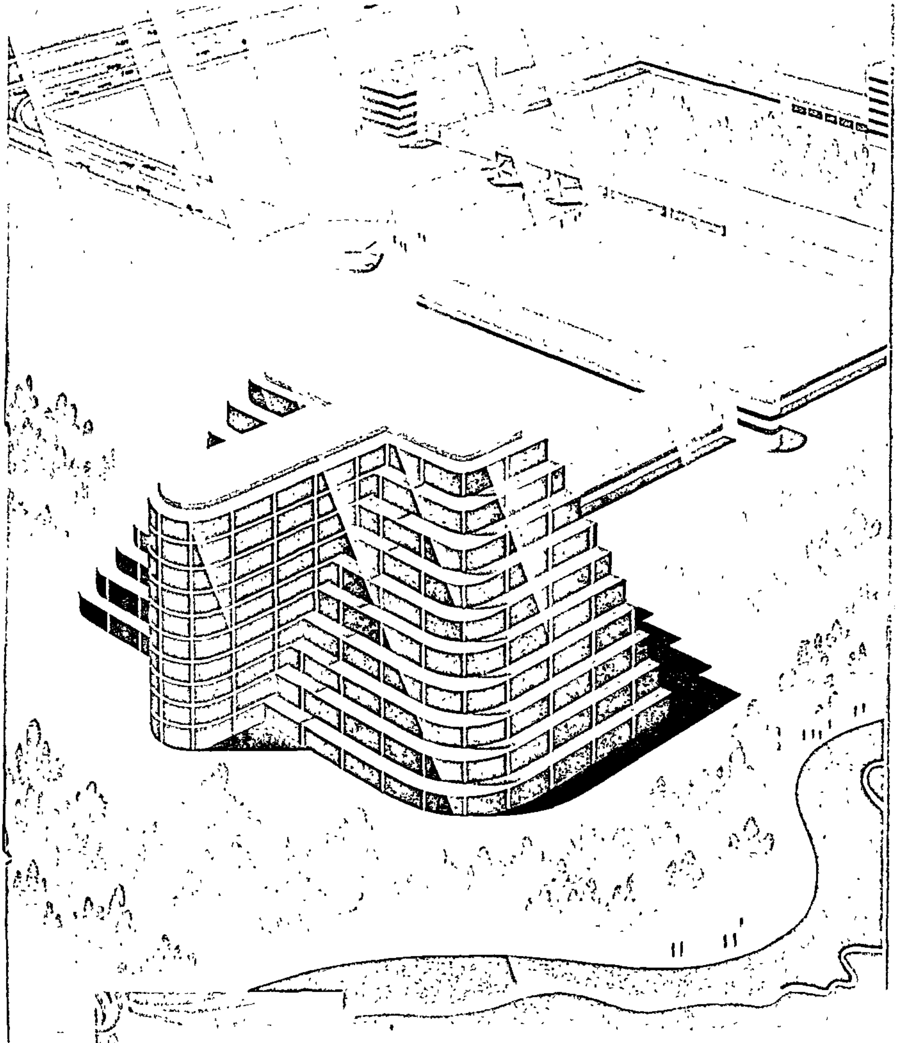
All goiters are toxic in the sense that they present some symptoms of dysthyroidism but, of course, all goiters are not toxic if measured from the standpoint of the metabolic rate or from the standpoint of the pulse rate, or, from any other one symptom or sign of thyrotoxicosis. The presence of a goiter with only one symptom of thyrotoxicosis, after all other allied and kindred diseases have *definitely* and *positively* been ruled out, establishes the diagnosis of thyrotoxicosis. The disease may be mild or incipient, but the disease is present.

There are many types of goiters as explained by so many different classifications. The facts of importance to remember are:

1. That there are as many different stages of toxicity of a goiter as there are pennies in a dollar. Perhaps more.
2. That regardless of the type or stage, all goiters eventually lead to heart disease—either typical thyrotoxic heart disease or degenerative heart disease.[8]
3. That a goiter has periods of exacerbations and periods of remissions just the same as any other chronic disease. But the entire process is one of progression until irreparable visceral damage has occurred. All during the life of a goiter there are constant physiologic and pathologic changes going on. These changes are influenced by many conditions—the weather, menstruation, pregnancy, emotionalism, excitement, etc. Changes can even be made for the better, temporarily, but the end result is visceral damage and a shorter life span.

The preoperative preparation of a patient for thyroidectomy should consist of all measures essential to place the patient in a condition where all the requirements for safe thyroid surgery have been met. These requirements are:

1. A lowered and/or favorable pulse rate.[9]
2. An increase in weight or, at least, a stationary weight.[9]
3. Lessened nervousness.[9]
4. An improved and satisfactory aponea test.[9]
5. A lowered and favorable basal metabolic rate.[9]
6. Good morale.



THE ARCHITECTURE OF TOMORROW'S HOSPITAL is charact
horizontal planning. Interior structure makes
sufficient. Sliding glass panels connect
with terraces, pyramided to pre
Natural surroundings are used
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autogiro. For advances in sutur

LESS TISSUE REACTION

with Finer-Gauged Surgical Gut

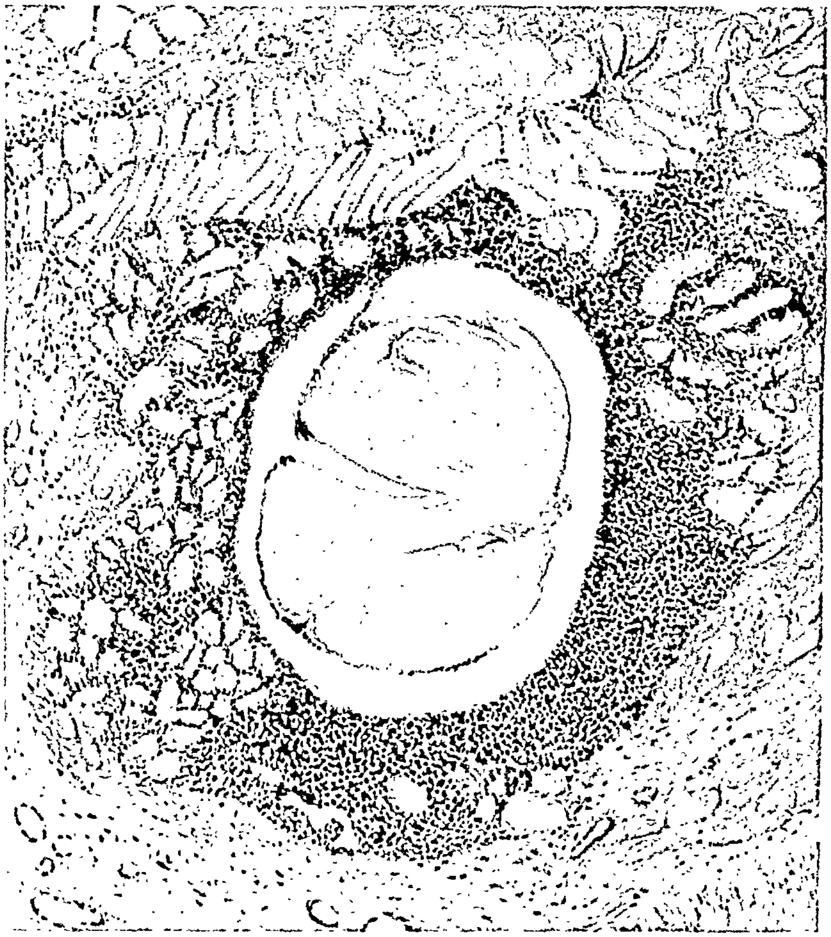
○ An important development in American surgery is the trend toward the use of finer-gauge surgical gut.

This development is based upon research which has demonstrated that the degree of tissue reaction to gut is directly proportional to the size of the suture. When fine gut is used there is less tissue trauma from the suture itself and from its transit; correct apposition is facilitated.

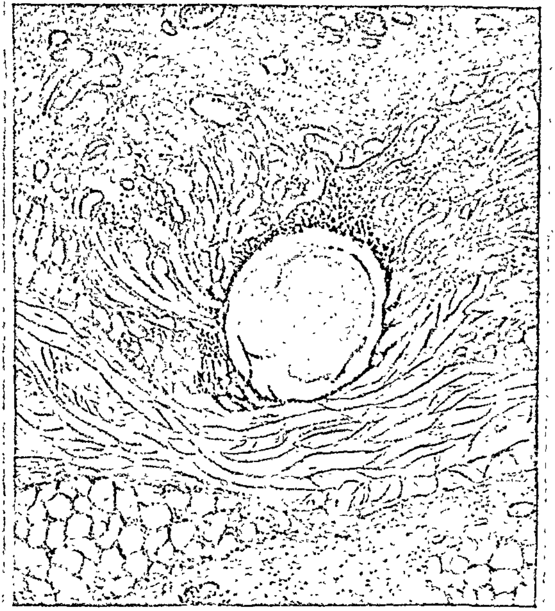
The possibility of dead space is decreased.

These factors, in combination with the accepted surgical axiom that the tensile strength of any suture need never exceed the tensile strength of the tissues it holds, are responsible for the utilization of finer gauged sutures.

The accompanying drawings from histologic sections illustrate tissue reaction to surgical gut.



1. Composite section showing Size 2 Medium Chromic Surgical Gut imbedded in abdominal wall of a rabbit. Tissue was excised on seventh postoperative day. (Hematoxylin and Eosin stain.) Magnification of drawing, x50. Note extensive leukocytic infiltration and inflammatory exudate. Clear zone surrounding surgical gut is due to fixation shrinkage.



2. Composite section (x50) showing Size 00 Medium Chromic Surgical Gut imbedded in abdominal wall of rabbit, and removed on seventh day. Note minimal leukocytic infiltration and absence of inflammatory exudate in marked contrast to extensive reaction with larger suture. Clear zone surrounding surgical gut is artifact due to fixation shrinkage.

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- *Greater uniformity of gauge gives greater uniformity of strength.*
- *Tru-Chromicizing gives uniform distribution of chrome from center to periphery.*
- *Lock-Knot Finish creates a gripping surface that aids in locking knots.*

ETHICON
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ETHICON
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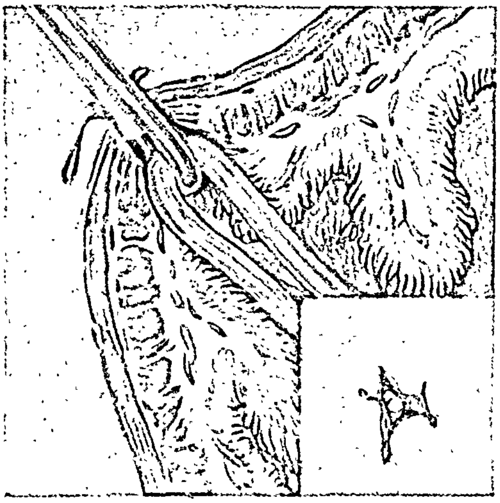
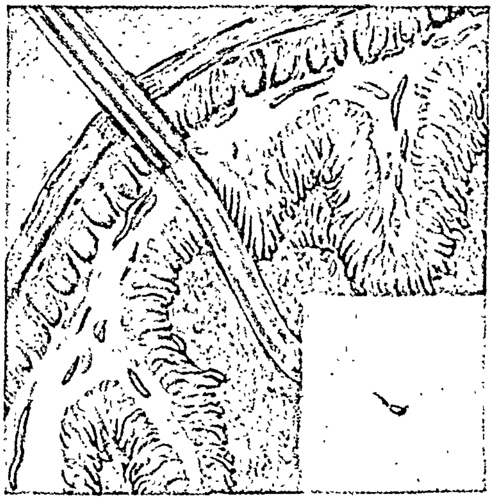
Atraloc Needles

FOR MINIMAL SUTURE TRAUMA



EYED NEEDLE

The eyed needle does greater injury to tissue because it pulls a looped suture in its wake.



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The condition of the vocal cords should be known before any thyroidectomy, and especially before an operation for recurrence. The blood calcium content should always be determined before operating on recurrences.

The above requirements can usually be met in a relatively short period, one to three weeks, by the conventional *method of treatment*, i.e., *iodine, rest*, sedatives and an increased caloric intake.

If the operator has even the slightest doubt as to the condition of the patient, the operation should be delayed. Thyroidectomy is never an emergency except in tracheal obstruction.

In cases that are severe in nature, and where the requirements cannot be met in the time mentioned (and these can usually be judged beforehand), then all precautions possible should be used; *especially taking more time*; *continuing* use of iodine, stimulating the liver with foods and drugs, such as intravenous glucose, insulin, bile salts, liver concentrate and glycine and, if necessary, enough time to permit a remission to occur from natural causes. It must be remembered that any type of interference, at the wrong time, can precipitate a crisis. This includes ligations and x-rays, but does not, necessarily, mean that the proper use of x-rays in selected cases is valueless and harmful.

Where one has met all the requirements for safe thyroid surgery, then his anesthetic should be considered. The surgeon should use the anesthetic that experience has proved best in his hands.

I have obtained, without exception, entirely satisfactory results with a basal anesthetic of 3 gr. of sodium amytal the night before and 6 gr. of sodium amytal two hours before the operation; and with 1/6 to 1/4 gr. of morphine and 1/200 gr. of atropine 30 minutes before the operation and 2 per cent novocaine, with or without adrenalin, used as a local block for the superficial cervical plexus and the descending branch of the twelfth nerve, which supplies the ribbon muscles. A total of not more than 16 cc., and often as few as 8 cc., is adequate.

The patient should be fully informed as to the exact nature of everything that is going to happen, except the actual operative steps, *the day before the* operation. The reason for the type of anesthetic used should be explained fully. This puts the finishing touches on the patient's morale and assures the operator of coöperation on the part of the patient.

The more toxic the patient, the more important is the anesthetic. Surely no anesthetic that markedly lowers the liver function should be used in a severely toxic case.

The fast and highly experienced operator has wide latitude *in the choice of* anesthetic, since the patient will not have to remain long under *its influence*. Any inhalation anesthesia has some bad effects on the patient.

It is not uncommon under local block anesthesia, even though the operation be prolonged, for the pulse rate to be better at the end of the operation than at any time during the stay in the hospital prior to the operation. This cannot be said of inhalation anesthesia, for if a patient remains under it long the *pulse will be fast, due to the anesthetic* itself.

The operative technic should begin with draping the patient after cleansing and sterilizing the field so that the wound will not be contaminated.

At this point an elliptical collar incision is made through the skin, subcutaneous tissues and the platysma muscle. The point of election for the incision depends on the size [illegible] o [illegible] doe. the length of the [illegible] t[illegible] remember that t [illegible] rlously well, and it is not necessary to it the neck from ear to ear. All paents appreciate a small, neat, scar ter their recovery. This does not ean that adequate exposure should be crificed for the sake of comeliness. It rarely, if ever, necessary to cut the bbon muscles regardless of the size of e goiter, for the larger the goiter, the ore stretched are the ribbon muscles, nd they can be neatly retracted for adeuate exposure. One step absolutely ssential in thyroidectomy is to enter e proper plane of cleavage.[10] This is etween the true capsule and the surunding tissues. In this way the entire land can be delivered and everything lse preserved, especially the parathyoid bodies. Having delivered one lobe, e upper pole should be dissected out nd ligated adequately. Then the same teps should be taken on the opposite le. At this point the trachea should located and the lower poles of the yroid clamped and tied. Then one can tay on top of the trachea and remove he entire gland, leaving the trachea are, as it should be, and each lobe fossa ntirely empty. After tying each vessel r tissues clamped in the most accurate anner, and after the surgeon has acomplished complete hemostasis, the ound is ready for closure. The ribbon uscles should be brought together, the ubcutaneous tissues and platysma uscle sewed snugly together to help revent serum, and the skin approxinated with a subcuticular stitch which an be pulled out on the second postperative day.

I use plain No. 1 catgut for the large essels and plain No. 0 catgut for the maller vessels and the subcutaneous issues. These are absorbed quickly and n case of accidental infection of the ound, the wound will not have to drain ntil all the foreign body ligatures and utures slough out.

How much of the goiter should be removed? In a hyperplastic gland, since the entire gland is involved, the entire gland should be removed. If any portion of the gland is left, the patient has to put up with that much of the disease, even though he may be relieved of a large part of his burden. The avenue to recurrence is wide open, and too often he is in the midde of the road of a persistence.

In the nodular goiter one must remember that nodules must have a beginning. The patient surely has the tendency, and who can tell without inspection that the lobe of the opposite side does not contain a nodule? Too often it does, and those nodules are the seat of malignant changes. The author would not be one to argue over the removal or leaving behind of a small fragment of tissue in a gland that is not highly friable and toxic to the detriment of his patient's immediate well being, but the rule should be to worry about how much is left in and not worry about how much was taken out. As long as it is all thyroid tissue that was removed, all is well if enough was removed. We must remember that the young use this gland to grow up on, but the matured do well without any part of their goiter. The removal of the entire normal gland is an entirely different subject.

It has been reported on good authority that lobectomies save many lives. One explanation is that the liver is not "let down" too quickly. Surely if the patient and the operator are in trouble the operator should stop where he is, and he should have his field so in order that he can stop. Another explanation is that a lobectomy can be done more hurriedly. Be all this as it may, in the author's experience in the more toxic cases, the more thorough the job the less reaction and the more prompt the recovery.

Drainage is not used because it has a tendency to promote hemorrhage. If all the vessels are securely ligated there will be no need for drainage.

The prevention of a crisis is of the utmost importance. Postoperatively, assuming that nothing but the thyroid was disturbed (that is, there was no injury to the nerves and the parathyroids were preserved), the control and prevention of hemorrhage is of the utmost importance, because hemorrhage may directly or indirectly precipitate a crisis. Hemorrhage causes pain and emotional excitation, either of which may be the cause of a crisis. Hemorrhage causes increased wound secretion and focal infection, or it may cause asphyxia, any of which may bring on a crisis. Hemorrhage through fear may cause an increased amount of adrenalin in the blood stream and hence be a contributing factor.[11] It is imperative that hemorrhage be prevented. Not the slightest hemorrhage should be tolerated before closing.

The immediate postoperative care depends upon the toxicity of the case and the age of the patient. Generally speaking, the young should be sedated and the aged stimulated. None should be allowed to suffer pain. All should have an adequate amount of iodine and glucose. Blood transfusions, oxygen with helium, vitamins etc., and good nursing care are paramount in the bad risk goiter.

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RÉSUMÉ

Les critéria qui déterminent la nécessité de la thyroïdectomie sont donnés. Il importe d'instituer un traitement opératoire qui nous procurera un pouls favorable ou moins rapide, un poids corporel au moins stationaire, sinon augmenté, un état nerveux accalmé, une accalmie nerveuse, une diminution du taux métabolique, un optimisme mental. Il faut que l'opérateur connaise l'état des cordes vocales de son malade. La préparation du malade demande de deux à trois semaines.

L'auteur préconise la lobectomie sous anesthésie locale (blocage), employant du catgut ordinaire No. 1 pour les gros vaisseaux et du catgut ordinaire No. 0 pour les vaisseaux du petit calibre. Il est très important de contrôler toute hémorrhagie consécutif à l'acte opératoire. Chez les jeunes on emploiera la sédation, chez les malades d'âge avancé la stimulation.

SUMARIO

Se han presentado las razones que determinan la necesidad de la tiroidectomía. La preparación del paciente reduce el peligro de la cirugía, especialmente cuando se consige la reducción del pulso, el aumento de peso o por lo menos mantener el peso estacionario, y cuando disminuye la nerviosidad del paciente y se obtiene un metabolismo basal favorable. Es también de valor el saber el estado de las cuerdas vocales. De una a tres semanas es generalmente suficiente para obtener una preparación adecuada.

El autor recomienda la lobectomía bajo anestesia local y el uso del catgut No. 1 para la ligadura de los vasos grandes y de No. 0 para los más pequeños.

Es importa [illegible] cont[illegible]ar las he[illegible]rragias post[illegible] a [illegible] ge[illegible]

ciente joven es tratado por la sedan y el de edad avanzada por la estimación.

Выводы

Автор дает указания для тиропдекто-и. До-оперативная подготовка имеет виду: умедление пульса; придачу веса; нижение нервности; понижение обмена; хорошое самочувствие; определение состояния голосовых связок. Удовлетворительная подготовка требует от одной до трех недель. Автор рекомендует лобектомию под местным обезболеванием употребляя катгут Но. 1 для подвязки крупных сосудов и катгут Но. 0 для перевязки мелких сосудов.

Neumonectomía Total Experimental*

(Total Experimental Pneumonectomy)

JULIÁN GONZÁLEZ MÉNDEZ, M.D.
MEXICO, D. F.

SUMMARY

The technic of experimental pneumonectomy is presented as follows: (1) incision parallel to the ribs; (2) separation of the Latissimus Dorsi; (3) separation of the Serratus Major; (4) subperiosteal resection of the fifth rib; (5) pleurotomy; (6) ligature of the vessels; (7) ligature, section and suture of the stump; (8) pleurotization; (9) closure of the pleural cavity; (10) suture of the outer layers, and (11) dressing.

SUJETO en decúbito lateral derecho, fijado sobre la canaladura de Claudio Bernard. Operador colodo del lado dorsal. Incisión oblícua acia el esternón y la extremidad cefáca, perpendicular a la dirección de las ostillas: el extremo dorsal sobre el bore externo de la masa sacro-lombar, el xtremo ventral sobre una línea transersal que pase por el borde caudal de escápula; longitud en proporción a la lla del animal, comprendera seis costillas con sus respectivos espacios (Fig. 1).

Cortar piel, tejido celular y fibras del cutáneo que siguen una dirección paralela a la incisión (Fig. 2), hasta descubrir las fibras del dorsal ancho que tienen igual disposición. Hacer la hemostasis cuidadosa de los vasos subcutáneos. Identificar el borde ventral del dorsal ancho en toda la longitud de la herida: rechazar hacia el vientre el labio cutáneo correspondiente separando el telido celular subcutáneo, de la cara superficial del dorsal, por medio de cortes de bisturí, mientras se lleva hacia el dorso el músculo; colocar un gancho separador (Fig. 3).

Descubrir las digitaciones del serrato mayor. Cortar el tejido célulo-grasoso que continúa hacia el vientre el borde del dorsal; introducir los índices debajo del músculo, apartarlos después para separar su cara profunda de la superficial del serrato; una capa de tejido celular laxo facilita esta maniobra; colocar ganchos separadores (Fig. 4).

RESECCIÓN SUB-PERIÓSTICA DE LA 5A COSTILLA:

(a). Determinarla palpando la pared costal con la extremidad de los dedos debajo del dorsal, del vértice del tórax hacia la extremidad caudal.

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*Presented at the Third International Assembly of the ternational College of Surgeons held in Mexico City, ugust, 1941.

(b). Separar las digitaciones del serrato en el espacio situado sobre la costilla. Con un gancho separador hacer tracción enérgica hacia el dorso para descubrir la mayor extensión posible de la cara superficial de la costilla: aparece el tejido celular laxo que cubre el periostio y ramos perforantes intercostales que deben ligarse (Fig. 5).

(c). Incidir el periostio y separarlo completamente de las caras y bordes (Fig. 6).

(d). Resección ósea (Fig. 7).

ABERTURA DE LA CAVIDAD PLEURAL:

(a). Incidir el periostio y pleura parietal en dirección de la costilla extirpada (Fig. 8).

(b). Iniciar la insuflación rítmica.

(c). Colocar dos ganchos separadores de Gosset: el primero perpendicular a la dirección de las costillas, el segundo paralelo a ellas; con la rama dorsal de este último comprender solo los planos blandos, con la ventral abarcar también el extremo respectivo de la costilla resecada (Fig. 9).

(d). Seccionar los cabos óseos que hacen saliente después de colocar los ganchos de Gosset.

LIGADURA DE LOS VASOS:

I. Arteria pulmonar.

(a). Luxar el lóbulo cefálico hacia la extremidad caudal sin exteriorizarlo, ayudándose con una compresa: aparece la porción cefálica del hilio pulmonar y la aorta toráxica hacia el dorso.

(b). Identificar la rama izquierda de la arteria pulmonar, inmediatamente abajo del cayado aórtico en el borde cefálico del hilio.

(c). Levantar la pleura mediastina que cubre la arteria con pinza de disección y hacer un corte de tijera siguiendo el eje del vaso.

(d). Disecar la arteria descubierta en la mayor extensión posible.

(e). Pasar debajo de ella dos agujas de Cooper en sentido contrario y apartarlas para completar la liberación del vaso. Cuidar de no herir en este momento la vena pulmonar superior (Fig. 10).

(f). Pasar otra aguja de Cooper montada con hilo grueso enmedio de las anteriores y retirar éstas.

(g). Anudar en la porción más distal de la arteria, sin cortarlos extremos del hilo.

(h). Pasar y anudar sucesivamente dos ligaduras más ayudándose en estas maniobras con los cabos largos de la primera ligadura y las agujas de Cooper. Estas nuevas ligaduras se harán en la porción central de la arteria dejando entre ellas y la periférica una distancia no menor de un centímetro.

(i) Seccionar la arteria, sosteniéndola con los extremos de las tres ligaduras, más cerca de la ligadura periférica que de las centrales.

(j). Cortar los extremos de las ligaduras.

II. Venas pulmonares.

(a). Exteriorizar todo el pulmón con una compresa, rechazándolo hacia el dorso para exponer la cara ventral del hilio: aparecen las venas pulmonares cubiertas por la pleura mediastina, en íntima relación con la superficie correspondiente del bronquio. La superior se halla sobre el borde cefálico de éste, muy cerca de las ligaduras centrales de la arteria; la media, de calibre menor, camina sobre la porción media del bronquio; la inferior, de volumen mucho mayor que las otras, sigue el borde caudal apartándose de éste en su extremo central y ocupando después el borde cefálico del ligamento triangular (Fig. 11).

(b). Identificar las venas en el órden señalado.

Vena superior.

(a). Levantar la pleura mediast[illegible] entre las venas [illegible] r [illegible] edia pinza de disec [illegible] te

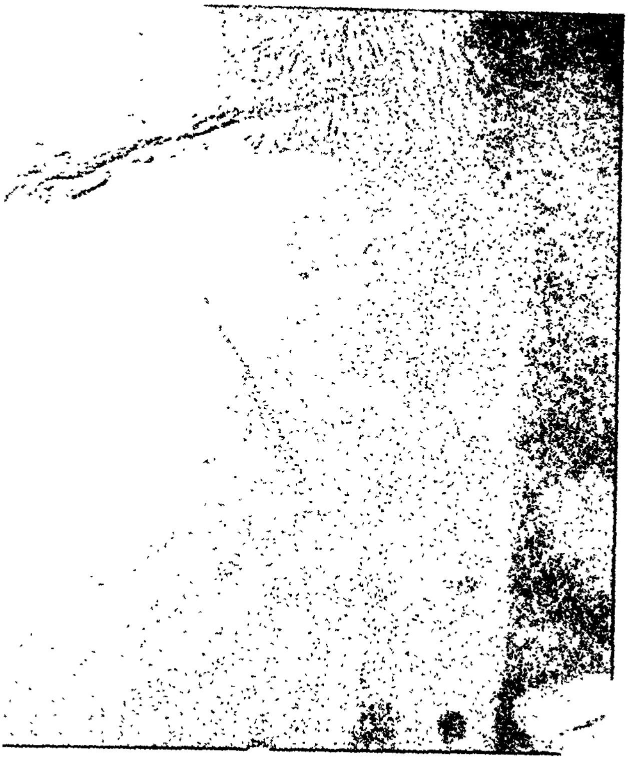


Fig. 1. Línea de incisión.

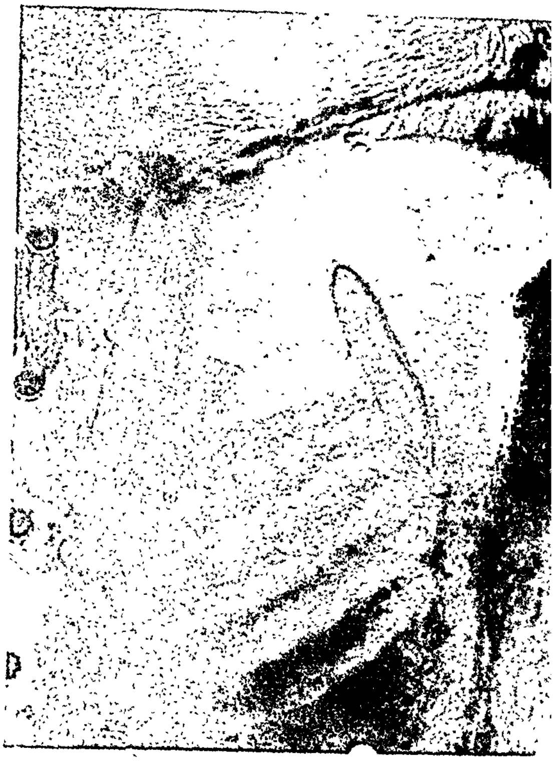
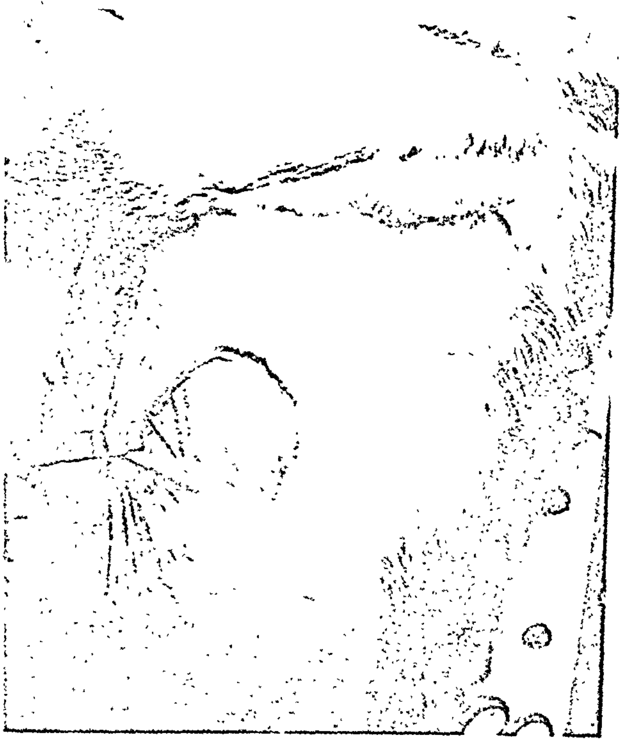


Fig. 2. Incidida la piel y el tejido celula las fibras del cutáneo.



ig. 3. Se ha descubierto [illegible] sal; el gancho separa la piel

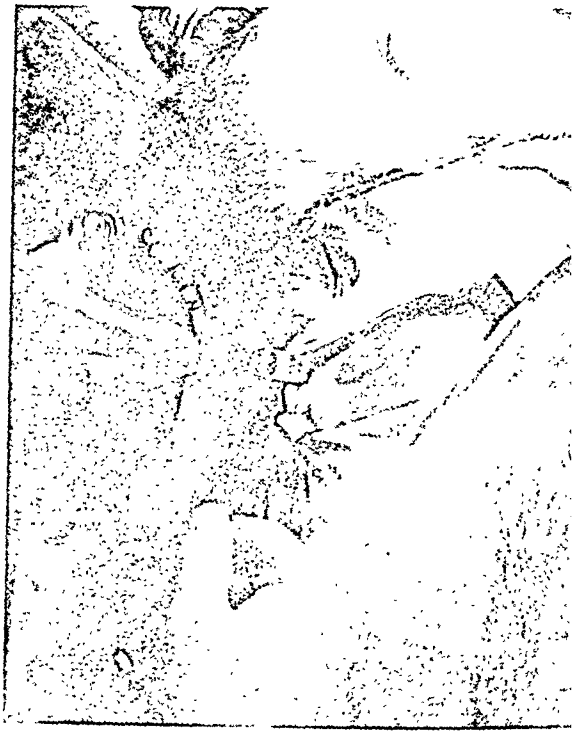


Fig. 4. Se aprecian las digitaciones del mayor separando ampliamente el dorsal y los cutáneos.

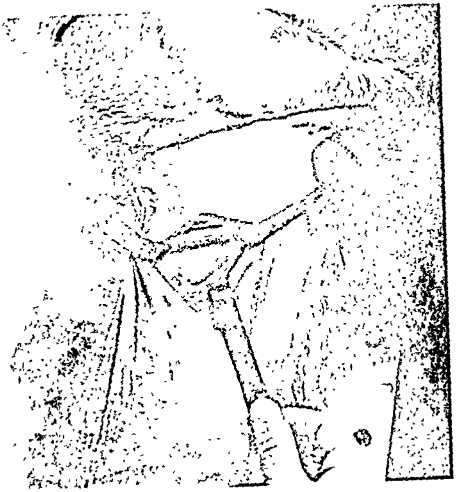


Fig. 5. Sobre la 5a costilla se han abierto las digitaciones del serrato que la cubría.

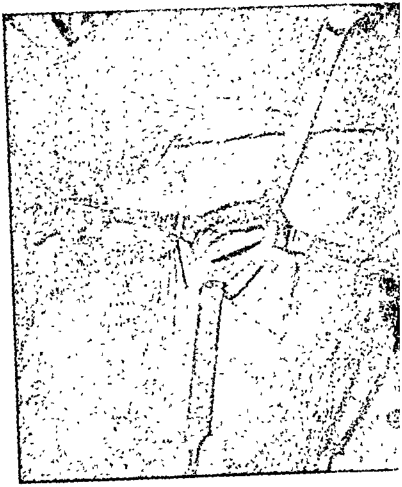


Fig. 6. Se ha quitado el periostio en tod longitud de la costilla por resecar.

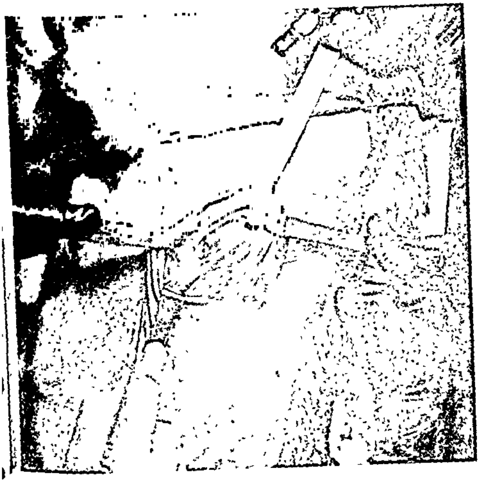


Fig. 7 Resección subperióstica de la costilla terminada.

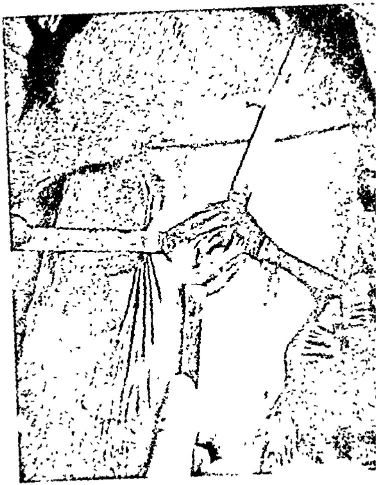


Fig. 8. Cavi [illegible] abie

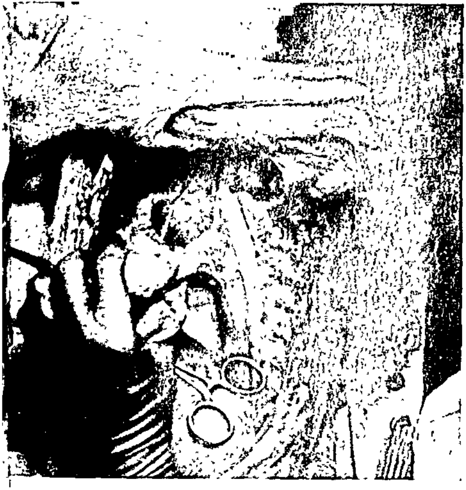


Fig. 13. Pulmón llevado hacia el plano ventral. Se observa perfectamente el neumogástrico y la pleura mediastina dorsal que lo cubre, lo mismo que al bronquio.

Fig. 14. La cara dor
cubierto rechazando el
arterias bronquiales. Se
la arteria y de las venas

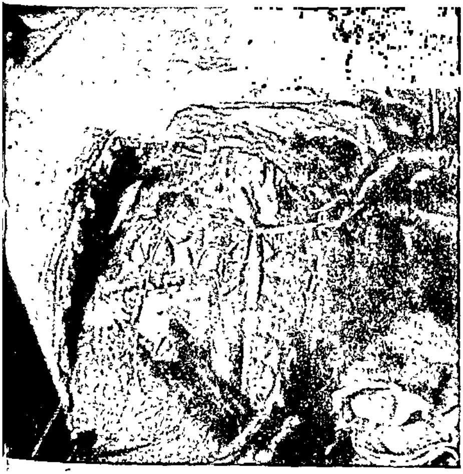


Fig. 15. Aspecto de la cavidad después de hecha la cinta. Se procederá a la sutura del muñón bronquial.

Fig. 16. Li
pleurización.

a perpendicular a la dirección de asos.

). Descubrir la superficie ventral ronquio separando de ella la vena.

). Pasar debajo de ésta dos agujas ooper y apartarlas para completar eración del vaso.

) Pasar otra aguja de Cooper mon- con hilo enmedio de las anteriores irar éstas.

). Anudar en la porción más distal a vena sin cortar los extremos del

). Pasar otra ligadura y anudar lo cerca posible del pericardio, dejar e ambas una distancia cuando menos n centímetro.

). Seccionar la vena sosteniéndola os extremos de las ligaduras.

). Cortar los extremos de los hilos.

a media.

). Levantar la pleura mediastina e las venas media e inferior en la na forma descrita para disecar la rior.

). Hacer maniobras iguales para su lura.

a inferior.

). Cortar el extremo caudal del nento triangular.

). Pasar las agujas de Cooper de- de la vena ya separada del bronquio cubierta por las pleuras mediastinas ral y dorsal; evitar de comprender ste tiempo el neumogástrico.

). Terminar las ligaduras del mismo o señalado para la vena superior . 12).

). Completar la disección de la su- icie ventral del bronquio hasta llegar bifurcación de la tráquea: rechazar a el pericardio las ligaduras centra- le las venas y la pleura mediastina ral que las cubre; ayudarse con gasa tada en una pinza.

Arterias bronquiales.

). Llevar el pulmón exteriorizado a el vientre, sostenido con una compresa, para exponer la cara dorsal del hilio: aparece la pleura mediastina dorsal que cubre íntimamente el bronquio, los hiletes pulmonares del neumogástrico y las arterias bronquiales; éstas son apenas visibles, generalmente existen dos: una más pequeña situada en la porción media, sigue la rama principal del nervio, otra llega al bronquio por la porción más caudal y dorsal de él, paralela y muy cerca del tronco del neumogástrico, que se vé perfectamente bordeando el extremo dorsal del hilio (Fig. 13).

(b). Levantar con tijera y pinza de disección la pleura mediastina dorsal separándola del bronquio.

(c). Colocar pinzas de hemostasis finas en los sitios correspondientes a las arterias.

(d). Cortar la pleura, junto con los filetes nerviosos y las pequeñas arterias pinzadas, lo más lejos posible del tronco del neumogástrico.

(e). Ligas los vasos con catgut fino.

(f). Terminar hacia el dorso la separación de la pleura para dejar completamente descubierta la cara correspondiente del bronquio; ayudarse con gasa montada en una pinza (Fig. 14).

LIGADURA, SECCIÓN Y SUTURA DEL BRONQUIO:

(a). Pasar una cinta de lino de tres milímetros de ancho, rodear el bronquio inmediatamente después de la bifurcación traqueal y anudar con presión suficiente para ocluír la luz, pero no exagerada porque esfacelaría el muñón; sostener los extremos largos de la ligadura con una pinza.

(b). Colocar un clamp curvo en el extremo distal del bronquio ligado, a una distancia approximada de dos centímetros, cortar con tijeras junto al clamp; sostener el muñón bronquial con los extremos de la ligadura (Fig. 15).

(c). Hacer puntos aislados en los bordes de sección del muñón bronquial con *catgut crómico atraumático número 1.*

(d). Hacer otra línea de sutura entre la anterior y la ligadura con puntos en U perpendiculares al eje bronquial; usar el mismo material y comprender si fuera necesario la cinta de la ligadura.

(e). Cortar los extremos de ésta.

PLEURIZACIÓN:

Hacer un surjete continuo para suturar los bordes seccionados de las pleuras mediastinas ventral y dorsal cubriendo los muñones vasculares y el bronquial.

(a). Comenzar en el ángulo cefálico de la brecha mediastina, sobre el muñón de la arteria pulmonar; usar catgut atraumático 00.

(b). Cuidar de no comprender en las puntadas los muñones vasculares, el pericardio ni el neumogástrico.

(c). Terminar en el ángulo caudal de la brecha mediastina, sobre el ligamento triangular seccionado (Fig. 16).

CERRADURA DE LA CAVIDAD PLEURAL:

(a). Limpiar perfectamente la cavidad.

(b). Quitar los ganchos de Gosset.

(c). Colocar ganchos de Farabeuf, separar el dorsal y el borde cutáneo ventral (Fig. 17).

(d). Hacer puntos aislados con catgut atraumático número 1 abarcando únicamente los haces del dentado; comenzar en el extremo dorsal de la herida; terminar en el ventral, anudando el último punto precisamente en inspiración completa para desalojar la mayor cantidad de aire de la cavidad; ayudarse en este tiempo con una pinza entreabierta introducida en ella que se retira rápidamente en el momento necesario (Fig. 18).

(e). Suprimir la insuflación rítmica.

SUTURA DE LOS PLANOS SUPERFICIALES:

(a). Hacer puntos de colchonero para unir la cara profunda del dorsal a la superficial del dentado; comenzar por la porción dorsal (Fig. 19) en líneas paralelas a la dirección del primero (Fig. 20); terminar suturando su borde al tejido celular profundo y a las fibras del recto, en toda la longitud que se había separado al principio, emplear ahora puntos separados; usar catgut simple fino (Fig. 21).

(b). Hacer puntos semejantes a los descritos para unir la cara profunda de la piel a la superficial del dorsal; comprender tejido celular subcutáneo y fibras del músculo; comenzar en la porción ventral del despegamiento cutáneo (Fig. 22); terminar suturando el tejido célulo-grasoso de ambos bordes de la herida; usar el mismo material (Fig. 23).

(c). Hacer puntos aislados con hilo grueso en los labios cutáneos (Fig. 24).

APÓSITO:

(a). Limpiar la herida suturada con agua oxigenada.

(b). Secar frotando con éter; rectificar el afrontamiento de los bordes.

(c). Impermeabilizar con colodión; cubrir con una tira delgada de gasa fijándola a la piel con la misma substancia.

La técnica descrita es el resultado de múltiples intentos realizados con el fin de garantizar la sobrevida indefinida de los animales.

Se obtiene con ella la cicatrización de la herida por primera intención o por infección, solo de los planos superficiales y siempre moderada, sin comunicar al exterior la cavidad pleural que causa la muerte del sujeto. Primer punto importante que depende exclusivamente de la forma de abrir y de cerrar la cavidad toráxica, sin comprender en las suturas la pleura ni los músculos intercostales, circunstancia que no impide una oclusión hermética.

Se consigue también una cicatrización definitiva del hilio pulmonar, indispensable en lo que se refiere [illegible] al [illegible] bronq[illegible] para e [illegible]

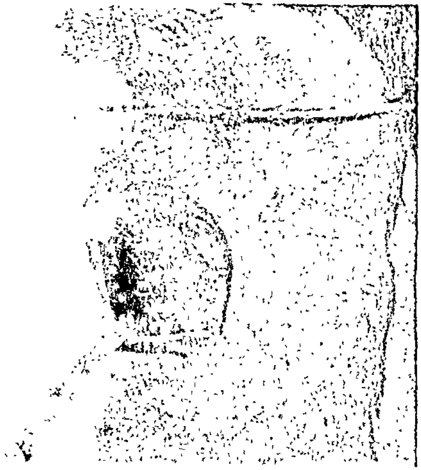


Fig. 21. Puntos separados comprendiendo el borde ventral del dorsal y el tejido celular profundo.

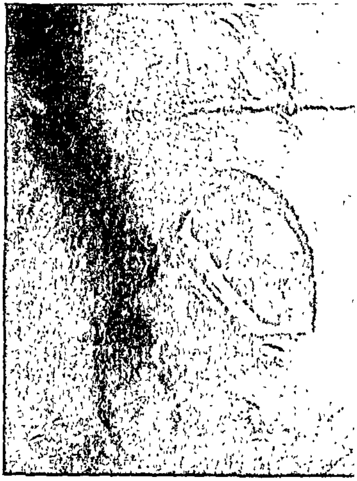


Fig. 22. Se empiezan los puntos que ados
superficial del dorsal a la profunda de la p

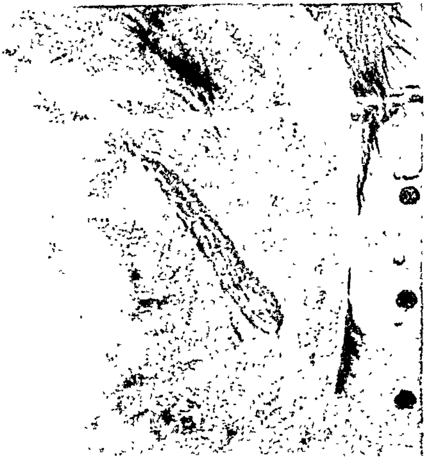


Fig. 23. Puntos aislados en el tejido célulograsoso subcutáneo.

gundo hecho interesante que se halla bajo el control de los tiempos mediastinales, ya sea en la manera de aislar los elementos como en las ligaduras y en los tipos de sutura empleados.

SUMARIO

Se presenta una técnica de neumectomía total en el perro, con la cual se logra una sobrevida indefinida: (1) incisión oblicua paralela a las costillas; (2) separación del Dorsal ancho; (3) id. del Serrato mayor; (4) resección subperiostea de la 5a costilla; (5) pleurotomía; (6) ligadura de los vasos; (7) ligadura, sección y sutura del bronquio; (8) pleurización; (9) clausura de la cavidad pleural; (10) sutura de los planos superficiales; y (11) apósito.

RÉSUMÉ

ne technique de pneumectomie totale, chez le chien, donnant une survie indéfinie, est présentée:

(1) Incision, parallele aux coôtes; (2) écartement du Grand Dorsal; (3) id. du Grand Dentelé; (4) résection sous-periostée de la 5ème côte; (5) pleurotomie; (6) ligature des vaisseaux; (7) ligature, section et suture du moigon; (8) pleurisation; (9) clôture de la cavité pleurale; (10) suture des plans superficiels, (11) pansement.

Выводы

Техника экспериментальной пневмонектомии описывается: (1) разрез параллельно ребрам; (2) сепарация латиссимус дорси; (3) сепарация серратус майор; (4) субпериостальная резсекция пятого ребра; (5) плевротомия; (6) перевязка кровеносных сосудов; (7) перевязка, сечение и шов культи; (8) плевротизация; (9) шов плевры; (10) шов внешних слоев и (11) перевязки.

Cholecystoduodenostomy for Hepatomegaly with Jaundice

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GREAT FALLS, MONTANA

THAT biliary intestinal anastomosis has a definite place in certain obstructive lesions of the common duct seems to be well established. It cannot be employed when there is involvement of the cystic or hepatic ducts or when we are dealing with small atrophic or calcified gall bladders. It is of value when the common duct has been injured, in cases where the gall bladder is still intact, in deformity of the common duct, either congenital or acquired, in inflammatory lesions, acute and chronic, intrinsic or extrinsic to the common duct and new growths, benign or malignant, involving the duct itself or from contiguous organs. Like any other surgical procedure it requires the exercise of sound judgment in its application.

CASE REPORT

G.S., breed Indian, aged 62, was admitted to the Columbus Hospital, January 2, 1941. Cholecystoduodenostomy was performed January 4, 1941, and the patient discharged February 2, 1941. The chief complaints on admission were: The patient had been ailing for the past six months. He gradually became weaker and lost weight. His eyeballs at times appeared deeper yellow, and his skin seemed darker in color. About noon each day he developed a dull pain in his stomach, which lasted until midnight. Eating of fruits and drinking of milk increased the pain. The patient stated that he did not belch, had no nausea and did not vomit. Stools were lighter in color than they had been. Prior to his illness the patient weighed 185 pounds, his present weight being about 150 pounds.

Past medical history revealed that the patient had had diphtheria, measles, frequent colds, rheumatism of the knees and wrists, surgery for double hernia and a tonsillectomy.

Personal history: irrelevant.

Family history: unobtainable.

Physical examination: male breed Indian in early 60's, thin and emaciated. Skin turgor poor. Sclera icteric. Throat, tonsils out. Teeth, carious. Gums spongy and bleed easily. Neck, scrawny but no adenopathy. Thorax, contour normal, muscle tone poor. Pulmonary fields, clear. Heart, not enlarged, tones good; regular in rhythm and rate; no murmurs. Arteries not sclerotic. Blood pressure 122/68. Abdomen, normal in contour. No visible peristalsis or tumor masses. Scars in both inguinal regions. Beginning in the left lower quadrant, no rigidity or palpable masses until the left hypochondrium was reached; here there was a *definite sense of resistance which extended* across the upper abdomen down through the entire right quadrant to the region of the crest of the ilium and obliquely upward and to the left hypochondrium. In this area there was a dull outward percussion. No marked increase in liver edge could be discovered, although the patient was very thin. In the region of the tip of the ninth rib there was a marked increase in tenderness. Sentinel nodes were not palpable. Rectal examination was negative for tenderness, adenopathy or enlarged prostate. Neurologic examination was negative.

Tentative diagnoses: obstructive jaundice; hepatomegaly due to common duct obstruction.

Gastro-intestinal and gall-bladder series: heart, normal in shape, size and position; rhythm normal; no abnormal shadows in the mediastinum or pulmonary fields; costophrenic angles clear. Esophagus showed no filling defects, spasm or diverticula. Stomach normal in size and position. Peristalsis active. No filling defects, niches, incisuria or accessory pockets. Emptying time four hours. Duodenal cap rather large. Fills normally. Curve of duodenum normal but somewhat distended. Gall bladder not visualized after oral dye administration.

Impression: no evidence of gastro-intestinal pathology; pathologic gall bladder.

Laboratory report: Urine, negative; RBC., 4,350,000; WBC., 8100; hemoglobin, 87.5 per cent; color index, 1.01; coagulation time, 4½ min.; neutrophiles, 63 per cent; eosinophiles, 1 per cent; lymphocytes, 35 per cent; mononuclears, 1 per cent. Serological examinations: Wassermann negative; Takata-Ara slightly positive; sedimentation rate, rapid fall within one hour. Blood chemistry: non-protein nitrogen, 35.7 mgm.; urea, 18 mgm.

OPERATION

On January 4, under cyclopropane, helium and supplemental ether anesthesia an *exploratory operation* was performed. Upon opening the peritoneal cavity, the liver immediately presented itself. It extended from the left hypochondrium obliquely downward, the edge half way between the costosternal border and the umbilicus, to the crest of the ilium. The liver edge was sharp. Its dark brown surface was mottled and covered with palpable nodules. On visual and palpatory inspection, its under surface appeared the same, except that the nodules were larger, especially in the region of the caudate and quadrate lobes and the common duct. Numerous dense adhesions fixed the duodenum deep in the hepatorenal angle. The abdominal cavity was free of fluid or ascites. There was no gross pathology of the stomach or the duodenum. The spleen was moderately enlarged and fibrous to palpation. The head of the pancreas was firm but not nodular, the body and tail which could be palpated seemed likewise free of nodulations. The appendix was of the short fibrous type. Due to the nodulations on the under surface of the liver, the hepatic and common ducts could not be visualized. The gall bladder, very thin walled and distended, measured about 17 cm. long, with a diameter of at least 9 cm. I could easily hold the distended bladder in my hand. Its wall was transparent. No stones could be palpated or visualized. The common duct could not be palpated. Very thin fluid contents, clear and yellowish in color, were evacuated.

Believing that some form of biliary intestinal anastomosis would be more physiologic than a permanent external drainage, a cholecystoduodenostomy was chosen. The procedure was carried out easily, due to the size of the bladder, which was left *in situ*. At the same time a wedge-shaped biopsy of the liver was made. The wound was closed in layers with one small cigarette drain to the site of anastomosis. Total operating time, one hour and thirty minutes.

Postoperative diagnoses: obstruction of common duct due to neoplasm, possibly carcinoma. Biliary cirrhosis with nodular hyperplasia, due to partial duct obstruction.

Pathologic histology report: Wall of the biopsy specimen of the gall bladder infiltrated with lymphocytes. Shows also formation of granulation tissue. Liver tissue shows evidence of cirrhosis. No malignant changes noted. Diagnoses: chronic cholecystitis; cirrhosis of the liver. Sig: T.W.

Progress: Recovery, uneventful. One transfusion was given and, routinely, intravenous fluids. Distention was controlled by immediate use of suction drainage and enemata of glycerin and water in proportion of 2/2. Medication consisted of prostigmine 1;2000 ampules i every four hours for six doses.

Follow-up: This patient has been seen at least every two months during the past year. He has returned to work. He is able to take almost all except the leguminous foods. The liver has become slightly smaller. His present régime of medication consists of one tablet of dehydrocholic acid daily, and large doses of vitamin B complex. Only rarely does he need saline cathartics. Correction of dental condition has also been beneficial.

Comment: The literature indicates that a procedure such as the one reported has a definite place in biliary surgery. Cholecystoduodenostomy has for its purpose the making of a patient subjectively and objectively more comfortable. Probing of the common duct in this case was avoided, and in fact I am personally chary of the procedure, preferring the use of either a 10 or 12 FS soft rubber catheter and 10 cc. syringe for irrigating. Probing and so-called dilatation of the common duct lends itself to nothing better than additional trauma.

CONCLUSIONS

Cholecystoduodenostomy has a place in hepatobiliary surgery.

Biliary intestinal anastomosis is not a formidable procedure, but one which may be safely carried out by the average surgeon.

Biliary intestinal anastomosis prevents the loss of a necessary digestive fluid, which occurs when an external fistula is created by cholecystostomy.

Biliary intestinal anastomosis cannot be employed in atrophied or calcified gall bladders, nor is it of value when both the cystic and common ducts are involved.

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RÉSUMÉ

La cholécystoduodenostomie a été employée avec succès dans l'hépatomégalie avec jaunisse.

Un cas est rapporté et les avantages du procédé sont énoncés: (1) Le malade est plus confortable. (2) Le cholédoque n'est traumatisé ni par sondages ni par dilatation. (3) La technique de l'opération est à la portée de tous les chirurgiens. (4) La perte du fluid digestif est évité par l'anastomose biliaire intestinal.

L'opération est sans valeur si les conduits cystique et biliaire communs sont lésés, et aussi ne doit pas être employée si la vésicule biliaire est atrophiée ou calcifiée.

SUMARIO

La colecistoduodenostomía ha sido empleada con éxito en la hepatomegalia con ictericia.

Se presenta un caso demostrando las ventajas del procedimiento quirúrgico, por las razones siguientes: (1) El paciente se siente más cómodo. (2) Todo el traumatismo ocasionado por el uso de la sonda para la dilatación del colédoco se evita. (3) El procedimiento de colecistoduodenostomía puede ser ejecutado por un cirujano de experiencia ordinaria. (4) Se evita la pérdida de líquidos digestivos por la anastomosis biliar-intestinal.

Esta operación no tiene utilidad en caso de obstrucción del cístico ó del colédoco ni debe practicarse cuando la vesícula muestra calcificación o atrofia.

Выводы

Автор удачно лечил случай генатомегалии с желтухой посредством холецистодуоденастомии. Выгоды этой операции в том что: (1) самочувствие пациента поправляется; (2) избегается травма халедока; (3) операция не требует тренировки; (4) сохраняется пищеварительный сок.

Эта операция не употребима при заболеваниях цистика или холедока, или случаях где желчной пузырь находится в стадии атрофии или кальцификации.

Malformations of the Gall Bladder

EURICO BRANCO RIBEIRO, M.D.

SAO PAULO, BRAZIL

A DOUBLE gall bladder and a gall bladder with a septum are frequently confused, and as recently as 1940 Stolkind reported a morphologic anomaly, the "hourglass gall bladder." Some writers have likewise confused the presence of a septum with that of folds or pleats in the gall-bladder wall which tend to separate the gall-bladder cavity into two or more separate compartments, giving a shadowgram which the roentgenologist interprets as a "Phrygian cap" gall bladder, an error shared in 1937 by J. Belot and L. Naham in France, by William Mayer, Franklin Carter and L. Meeker in the United States, and by Mario Duque in Brazil.

It is important that these anomalies be clearly differentiated and given their proper and anatomic designation as morphologic varieties.

In classifying these malformations a septum may be defined as a tissue dividing a cavity or hollow organ into two compartments. Thus we would speak of a vaginal septum as a structure or tissue wall dividing the vagina into two parts and would differentiate it from the vaginal diaphragm, a structure dividing the vagina into two parts but possessing a central opening or outlet which keeps the two cavities connected.

By the same token, a "vesicular septum," when referred to the gall bladder, is an anatomic structure separating the gall bladder into two cavities with no connection whatever, while the "diaphragm" is a structure or partition having a central aperture which allows free passage of liquids contained in the gall bladder. Such a structural formation gives rise to what is variously called "hourglass images," "hourglass vagina," "hourglass gall bladder," "hourglass stomach," etc.

The gall bladder with a septum can never produce the image of "Phrygian cap," because if there is a septum the x-ray contrast cannot reach the fundus of the gall bladder, which therefore is not visualized roentgenologically. Such an image appears when there is a fold in the wall that causes distortion or malformation in the fundus of the gall bladder. It is a type of anomaly entirely different from the one brought about by the presence of a septum and should not, therefore, be confused with it.

Still less understandable is the confusion between gall bladder with a septum and double gall bladder, when the septum is transverse and we obtain the shadow of one gall bladder with two cavities, distal and proximal, which is not in reality a double gall bladder because the distal portion of the gall bladder does not possess a cystic duct communicating with the choledochus. Even in the gall bladder with a longitudinal septum, when the latter extends into the cystic duct until it reaches the choledochus, we risk misinterpretation when these two halves of the gall bladder do not function anatomically and physiologically independently one from the other, as happens when there are present double and full functioning organs.

The gall bladder with a septum is a nondeveloped or incomplete gall bladder which may be subdivided, for purposes of classification, into three types, to wit: the simple septum, two gall bladders in apposition, and two entirely independent gall bladders. The evolution of the intermediary stages has never been observed; we believe, therefore, that there does not exist in reality a free, intimate relation between the double gall bladder and the gall bladder with a septum. To summarize, we may accept the following anomalies of the gall bladder:

1. "Phrygian cap" gall bladder
2. Hourglass gall bladder
3. Gall bladder with a septum
4. Double gall bladder

1. A so-called "Phrygian cap" gall bladder usually results from folds of the gall-bladder wall causing retraction near the fundus, and the opaque shadows of the x-ray give the appearance of a silhouette of the Phrygian cap, also called "hooked gall bladder." This was first described in 1916 by Bartel and is frequently observed. The incidence is about 4 per cent in a series of 1000 x-ray plates examined by Meyers, Carter and Meeker, which caused them to conclude *that these were congenital defects without* any pathologic significance, although Bromer emphasizes their clinical importance. Many writers believe that the formation of folds leading to Phrygian cap gall bladder originates in congenital malformations and variations in the anatomic constituents of the gall bladder wall, others reason that these changes originate in inflammatory etiology, even during intra-uterine life.

In accord with Sigmund's conclusions, modified by Mascheroni, Reussi and Lafage, there probably exist many types of malformations which should be given adequate designations.

2. Hourglass gall bladder is one in which the gall-bladder septum is transverse, as in a diaphragm, giving rise to two cavities communicating through the diaphragm by one or more apertures, and the anatomic condition usually fails to demonstrate calculi or inflammatory changes, leading to the conclusion that the septum and cavitations are congenital and not pathologic. Hourglass gall bladder is often diagnosed by x-rays discovered accidentally, or occasionally because of the presence of calculi.

In 1928 Levine reported three cases of hourglass gall bladder, demonstrated by cholecystography. As inflammation and cholelithiasis tend to influence the formation of hourglass gall bladder, it is not surprising that we were able to demonstrate by shadowgrams the presence of two or more cavities.

Unslenghi and Ramon Sbad reported a case of trilobar gall bladder resulting from adhesions which formed three lateral cavities, two of them containing calculi. In one case, Meyer, Carter and Meeker demonstrated by injection through the cystic duct the permeability of an existing diaphragm.

3. The gall bladder with a septum is one in which the cavities are completely separated, as stated before, in contrast to the diaphragm type of partition. This condition may be congenital or acquired, the congenital resulting from the embryonic process of vacuolization of the cord in the formation of a gall bladder; the lack of reabsorption of a small part might lead instead to the formation of a septum; an explanation that is not satisfactory in relation to cases demonstrating a longitudinal type of septum. In this type of case, comparative anatomy reminds us of the existence in animals of two gall bladders. The gall bladder with an acquired type of septum we believe to originate in an inflammatory process, as does likewise the hourglass gall bladder, with the single difference, however, that in hourglass bladder the division is only partial, as compared with septum separation.

In 35 cases of gall-bladder anomalies reported by Stolkind, there were 10 gall bladders with longitudinal septi, 2 with transverse septi, 3 bilobular without evidence of the existence of a septum, and 20 cases in which double gall bladder was demonstrated. The 2 cases of transverse septum reported by Stolkind were from records of Doctors Dévé and Standinisky, and we can add two more cases, one reported by Ugelli in 1935 and the other from personal observation. Such a rarity justifies Gross' dictum that "a bilobular gall bladder is exceptional in man."

The septate gall bladder may be diagnosed by x-ray examination when there exist calculi in its cavities. To Schachner belongs the priority (1918) of the report of a case in which there are two groups of calculi separated by a free space, corresponding to the septum. Since then (1927), Deaver and Ashurst published a case diagnosed by x-ray.

4. A typical double gall bladder is limited for classification to those instances in which both anatomically and functionally, two independent gall bladders are demonstrable, even though one of the gall bladders may be smaller than the other; however, they should both possess cystic ducts communicating with the common duct, although occasionally we meet with bifurcations of the cystic duct. The first such case was published by Foot in 1693-4 in the *Philosophical Transactions.* In 1886, Purser presented a new case and new observations were later made, either during surgical intervention or by autopsy, of the existence of these types of anomaly. Cholecystography has revealed two sep-

arate groups of calculi, thereby demonstrating the existence of a double gall bladder.

In 1931, additional cases were reported by Cave, Lond and Kayes, but these were not clearly convincing, as was later shown in 1932 in a case report by Corachan and Figueras-Faixat, in which the films demonstrated perfectly separate structural identities. Although in 1940 Stolkind collected 20 cases, with 4 others which were insufficiently described, we must bear in mind that in 1936 Gross had already announced that the literature contained 28 cases, a number previously confirmed by Corachan and Figueras-Faixat in 1932. Of these 28, 27 were found in women and only 1 in man, but in the chart worked out by Stolkind, there appeared 5 cases in the male, which leads one to the conclusion that there is need of a revision of the literature to a total of 40 cases up to date. This is more or less in accord with Boyden's investigations of 19,000 autopsies, in which he found one double gall bladder in each group of three or four thousand, including cases of double gall bladder and accessory or rudimentary gall bladders.

The total number of anomalies reported by this investigator in 10,000 autopsies on animals is rather interesting, as he found double gall bladders in ratios of 1:8 in cats, 1:28 in calves, 1:85 in lambs, and 1:198 in deer. It is well known that in animals a double gall bladder is frequently encountered, while others show either aplasia or hypoplasia (horses, donkies, elephants, camels, ostriches, antelopes, parrots, pigeons, rats, whales, etc.) showing that the evolution of a gall bladder is frequently made by changes in the hepatic parenchyma, in accord with Browman's explanations. It is interesting to note that in the giraffe there is either complete absence of the gall bladder or a double gall bladder.

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SUMARIO

Cuatro anomalías de la vesícula biliar son descritas: (1) vesícula a "Gorro Frigio"; (2) vesícula a reloj de arena; (3) vesícula segmentada; (4) vesícula doble.

Se da énfasis a la importancia de un diagnóstico diferencial correcto.

RÉSUMÉ

Quatre anomalies de la vésicule biliaire sont étudiés: (1) la vésicule biliaire "bonnet Phrygien"; (2) la vésicule biliaire "en sablier"; (3) la vésicule biliaire cloisonnée; (4) la vésicule biliaire double.

L'importance d'un diagnostic précis est considérable.

Выводы

Автор описывает четыре аномалии желчного пузыря: (1) Пузырь формы "Фригийской шапки"; (2) Пузырь формы песочных часов; (3) пузырь с перегородкой; (4) двойной желчный пузырь.

Подчеркивается ценность правильного диагноза.

A Method of Vaginal Hysterectomy to Conserve Blood in Inversion of the Uterus

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RECENT studies on the mortality rates for inversion of the uterus (10-43 per cent[1]) show little improvement in these rates during the past decade. It is the object of this paper to present a technic which, because of the simplicity of approach, will practically eliminate loss of blood during the operative procedure and minimize surgical shock. It is needless to say that by such a simple method infection can largely be controlled.

Before entering into the technic of the surgical procedure, I wish to make a few comments that should be carefully considered and studied by every teacher, as well as by practitioners of obstetrics. Recent studies classify shock into three divisions: (1) initial or primary shock; (2) traumatic or secondary shock; (3) the effects of hemorrhage.[2] There is no doubt that hemorrhage is by far the most serious complication of inversion of the uterus. A sudden change in the volume of blood of a given patient is, in my opinion, a much greater factor in producing shock than the actual mechanical action when the uterus is inverted. Secondly, complicating infections arise in direct proportion to the volume of blood lost (900 cc. of blood lost postpartem in a person weighing 60 kg. showed an incidence of 32 per cent of infections[3, 4, 5, 6]). Therefore, does it not seem reasonable that profuse and prolonged hemorrhages could be controlled more adequately and that inversion of the uterus, although of rare occurrence, could be recognized almost immediately, if our obstetrical teaching emphasized the following: first, that no delivery is complete until the placenta has been removed; second, and of equal importance, that no delivery is complete until the attending accoucheur depresses the perineum with a sterile strip of gauze on the gloved fingers of one hand, while he presses the uterus down with the opposite hand on the abdomen, so that the uterine cervix can be visualized.

It is the opinion of the writer that whenever the uterus is found to be completely inverted and bleeding is profuse, there is but one objective and that is to control bleeding. This control can be brought about best by depressing the floor of the perineum and passing one hand under the body of the uterus; then maneuvering the uterus out of the pelvis with the other hand on the abdomen. As soon as the uterus has been exteriorized, sterile gauze is thrown around the fundus and the organ is compressed between the two hands, first to aid in controlling [illegible] and to prevent [illegible] only sufficiently tight to control all bleeding. With all bleeding controlled, the physician may proceed with uterine constricting medication, which is injected directly into the body of the uterus.[7] After the uterus remains firmly contracted, the placenta, if still attached, may be removed; then the tourniquet may be released gradually. If this procedure has adequately controlled the bleeding, local antiseptic dressings are applied and the uterus is placed into the pelvis, whereupon the general treatment of the patient is begun as outlined by many authorities on this subject.[8, 9, 10]

I am in agreement with the writers on the subject who advocate conservative treatment[7]; but the conservative treatment need be carried through only until the patient has reached a normal state, provided the procedure of vaginal hysterectomy by the blood-controlled method which I shall outline is followed.

OPERATIVE PROCEDURE

On April 4, 1939, a patient, aged 33, entered the hospital with an inverted uterus, a severe hemorrhage, and a very grave general condition. The patient received treatment, and by April 18 she had recovered sufficiently to withstand an operation, which was performed according to the following procedure.

On each side a towel clamp was applied at the inverted cervix, and a rubber tube was thrown around the cervix above the clamps to act as a tourniquet. The anterior fundus of the uterus was opened. The incision was extended upward toward the cervix until the reflection of the bladder was encountered. A lock suture, started at the upper end of the incision, united the peritoneal surface of the uterus to the endometrial surface. (Fig. 1) This suture line was continued around the incision in the uterus to the opposite upper end of the incision. The lock sutures produced hemostasis in the uterine wall. After the tourniquet with the two towel clamps were removed from the cervix, the bladder was freed from the anterior wall of the uterus and displaced into the pelvis. The incision in the uterus was extended into the cervix. A large clamp was inserted at right angles into the cervix on each side. The two clamps met on the posterior wall of the cervix. In order that the broad ligaments with their vascular structures might not slip through the clamps when the uterus was removed, the broad ligaments with their vessels were ligated with chromic catgut sutures on both sides above the clamps. Five grams of sulfathiazole were inserted through the cervix into the peritoneal cavity. The uterus was amputated in front of the clamps, held together parallel, and a weaving suture line brought the stump together. In the

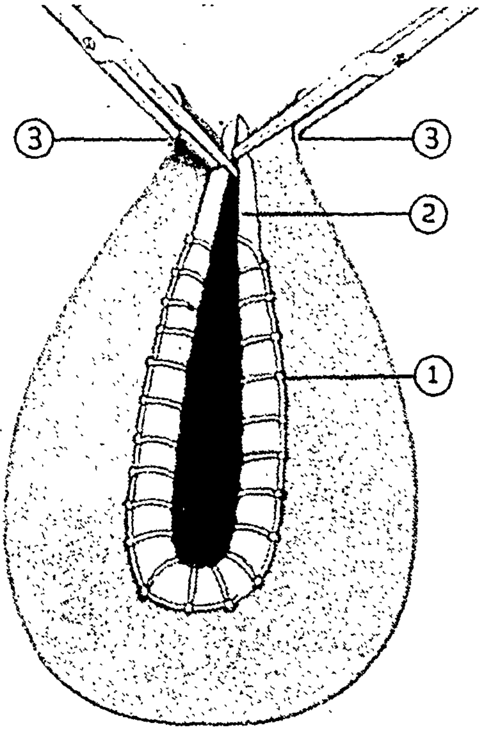

Fig. 1. 1. Incision in the body of uterus sutured with lock stitches. 2. Bladder displaced into pelvis and incision extended into cervix. 3. Hemostat inserted at right angles in proximal end of cervix.

first stitch the peritoneal bladder reflection was also included. The stump was invaginated by a continuous suture, bringing together the reflections of the vaginal wall at the cervical stump, a procedure which left no raw surface exposed. A large vaseline gauze pack was placed in the vagina for forty-eight hours.

The post-operative recovery was uneventful, and the patient left the hospital on the tenth postoperative day.

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RÉSUMÉ

Une technique d'hystérectomie vaginale qui élimine la perte de sang et contrôle l'infection est décrite pour être employée dans les cas d'inversion de l'utérus. Voici les différents étapes de l'opération: (1) extériorisation et compression de l'utérus; (2) placement d'un tourniquet autour du col de la matrice; (3) médication constrictant l'utérus; (4) enlèvement du placenta, s'il n'a pas été détaché; (5) enlèvement graduel du tourniquet; (6) pansements antiseptiques; (7) reintégration de l'utérus dans le bassin pelvien; (8) traitement général.

La technique est donnée en détail et un cas est rapporté.

SUMARIO

Ofrece una técnica para la histerectomía vaginal que elimina pérdidas de sangre y evita la infección en casos de inversión del útero.

El procedimiento incluye: (1) exteriorización y compresión del útero; (2) aplicación de un torniquete alrededor del cuello de la matriz; (3) medicamentos contractivos al útero; (4) extración de la placenta si permanece adherente; (5) el torniquete se afloja poco a poco; (6) aplicación de la gasa antiséptica; (7) reposición del utero en la cavidad pélvica; (8) tratamiento general.

Se da la descripción detallada de la técnica según se ha empleado en un caso.

Выводы

Автор описывает операцию вагинальной гистеректомии при инверзии матки, которая избегает потерю крови и инфекцию. Процедура такова: (1) экстериоризация и сжимание матки; (2) накладывание турникета на шейку матки; (3) вспрыскивание сжимающих медикаментов; (4) удаление последа; (5) медленное сжимание турникета; (6) стерильные перевязки; (7) возвращение матки в таз; (8) общее лечение.

Техника показанна детально при одном случае.

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UNITED STATES
WAR
BONDS
AND
STAMPS

THIS IS YOUR COUNTRY TO HAVE AND TO HOLD

KEEP HER FOREVER S ONG

BUY MORE AND MORE WAR

Editorials

Pontifex—Maximus

(The Bridge Builders)

WHILE this august heading is the traditional title that was conferred upon the supreme heads of a State and of the Church, the Emperors and the Popes, it is of interest to ponder upon its origin and significance. Conceived for the purpose of exalting the priestly class and ranking leaders of political power and of Christianity, it has had the emblematic or symbolic meaning "to build and to bridge" in constructive ideals and to unite in common effort the strength of the basic aims of human accomplishments.

Every activity and concept of progressive character and promise imply the elaboration, the planning and ultimately the bridging together of the details of organization so essential to the success of any scheme or plan.

International collaboration in the sciences and in the arts, as well as in politics, economy and commerce, is destined to prop up and spur delayed or retarded energy and to inspire and make effective the strength and bond of union so indispensable in carrying on and in perfecting all mental and physical labor designed for the advancement of knowledge and for the welfare and comfort of mankind.

To the bridge builders in the path of progress belongs the task of organization and action, and the implication of such responsibilities are inescapable, if the initiative and the ultimate objectives are sound and of lasting appeal and strength.

Constructive ideals and influences are and have always been, "among the attributes of mankind," the target of opposition and dissention, and we have learned at the fountain of experience that well-meaning and straightforward divergence of opinion and disagreement are not only natural and human, but at times stimulating and clarifying on the road to successful enterprise. While the practice of coercion and a sinister attitude are motivated by jealousy, the habit of aggression and lack of interest and understanding of vital issues, the effect is, nevertheless, destructive of initiative and of labor and self-sacrificing effort on the part of the honest sponsors of ideals.

The Bridge Builders and Founders of the International College of Surgeons have felt the urge and the need for the strength of collaboration from the leading surgeons of the world to enhance the natural genius and the inventive gifts which united efforts tend to develop, and the International College of Surgeons stands unrivalled and peerless in the world of surgery today, fostering union and strength, and aiming at the cherished objectives of efficiency and perfection.

The International College of Surgeons basically proposes the international union of outstanding national leaders in surgery, of universities, colleges, qualifying Boards, and such other groups as exist for the broadening educational scope and the achievement of eminence and proficiency in the art and science of surgery.

That such an ideal is attainable, there can be no doubt; that no such project exists today, with life and effectiveness, is equally true; similar nomenclatures of less constructive or far reaching objectives have fallen by the wayside or linger in practical oblivion or inertia, and can be counted in the roll call of failures.

The International College of Surgeons, duly organized and incorporated in the United States and abroad, possesses an international educational perspective and invites the collaboration of national institutions in preparation for an educational program of world-wide range. To this end, competent Committees of Executives, with counsel by the Board of Governors, are at work on the manifold problems arising in the effective development of teaching activities for young surgeons under the auspices and patronage of the College.

We shall emerge from this devastating war, only to enter upon a period of chaotic confusion and post-war exhaustion brought about by depletion of our energies. Happily, however, the medical profession has played a rôle of supreme importance never before equalled in the history of the world and its wars, with a glorious record in preventing epidemics, reducing to an astoundingly small percentage the mortality in action, and raising to an incredibly high number the successfully rehabilitated wounded, disabled and mutilated.

The Medical Department of the Armed Forces, in all branches of the service, has performed, through efficient organization and manpower, pioneer work for the immediate benefit of the combat men, as well as for the co-ordinated personnel behind the front lines, the civilian and those on the home fronts.

The medical units returning to civil life and work, bringing with them recorded experiences and discoveries, will write new pages in medical and surgical progress, for which task we must, on our part, be fully prepared.

Medical schools, hospitals, medical and surgical societies, in fact all the organized associations for standardized teaching and practice must be ready and equipped to absorb the new knowledge and to facilitate continued guidance and orderly experience for young surgeons and surgical specialists in order to place within their reach the full measure of opportunities for professional competency and ethical maturity.

The International College of Surgeons, through its basic principles and purposes, is and will be prepared to fulfil its pledged program for basic education and clinical teaching, with national and international material to put into realization the ideal for which the College was founded, incorporated and organized.

Desiderio Roman, M.D.
International President.

Use of Sulfonamides in Surgery

SURGICAL infection, one of the most dreaded operative complications, has been substantially reduced by the use of the sulfonamides, introduced to the medical world by the implantation of sulfanilamide in traumatic wounds and into the peritoneal cavity in 1939.

Originally hailed as a miracle worker, sulfonamide therapy is recognized by the more conservative to have its dangers and should not be used indiscriminately by the uninitiated. It was hoped that the two newest derivatives, sulfaguanidine and succinyl sulfathiazole would sterilize human feces, but such has not proved to be the case.

To employ sulfa drugs successfully, the surgeon must be familiar with the potential dangers associated with their use. Skin rashes, drug fever, renal complications such as oliguria, acute hemolytic anemia, depression of white blood cells, nausea and vomiting may occur. Sulfonamide therapy is not a substitute for surgical procedure, but it will often prevent postoperative infections—septicemia or pulmonary and urinary tract infections.

The question arises as to choice of sulfa derivative. There are now a number from which to select—sulfanilamide, sulfathiazole, sulfapyridine, sulfacetamide (Sulamid), sulfadiazine, sulfaguanidine and succinyl sulfathiazole. The latter two are still in the experimental stage to a greater degree than their predecessors. Criteria for selection are: bacteria involved, region of infection, previous sensitivity to a sulfa drug. The only real contraindication to sulfa therapy is previous toxic reaction to the derivative employed.

Experiments have shown toxic reactions to be least following sulfadiazine, less after sulfathiazole and most after sulfapyridine. Renal calculi are found less frequently in patients treated with sulfadiazine or sulfapyridine. Blood dyscrasias occur less frequently after sulfadiazine and sulfapyridine. To avoid toxic reactions, careful regulation of fluid intake and output, frequent blood counts and urinalyses and close observation of the patient are essential.

To be effective, adequate concentration of the drug in the bloodstream must be obtained. Such a blood level is achieved within four hours after oral administration of 4 gm. of the sulfa drug. Because sulfonamides are poorly absorbed during labor, therapy for nonpregnant women cannot be applied to parturient women, who are best treated by parenteral injections.

Sulfanilamide is indicated for local infections and is still the sulfonamide of choice for implantation into the peritoneal cavity in peritonitis. It is especially valuable in the peritoneal cavity in the presence of a general soiling with fecal material after operations for perforation of a diverticulum of the sigmoid. It has also been used successfully for direct implantation into the abdomen and appendicial abscesses. It is safe, effective, and there are no untoward reactions. In surgery of the large bowel, sulfanilamide is preferable; oliguria may follow the use of sulfadiazine.

Microcrystals of sulfathiazole are especially recommended in surgery because their small size permits a more rapid rate of solution than sulfathiazole in any other form. Sulfathiazole may also be used in abdominal suspensions. A chill followed by fever is a danger signal, and sulfathiazole should be discontinued immediately. Crystals in the urine and hematuria are contraindications to continuance of the drug.

Sulfathiazole is the drug of choice in treating infected or potentially infected surface wounds because it is effective against a wider range of organisms than sulfanilamide and over a longer period of time. Bleeding should be stopped as completely as possible and sutures inserted before the drug is introduced. Sutures should be tied after its application. Surface dusting may be followed by application of gauze impregnated with the powder. Strips of gauze treated with 5 per cent sulfathiazole vaseline ointment have virtually banished stitch abscesses.

In bone and joint surgery, sulfa therapy has reduced the incidence of death, and multiple bone involvement is reduced. The sulfonamides are used prophylactically to prevent relighting of a pre-existing, quiescent infection. Locally applied sulfonamide crystals have no apparent effect on the fate of transplanted bone. In hematogenous osteomyelitis fewer instances of massive bone necrosis occurred after sulfa therapy. Sulfathiazole gives encouraging results in chronic osteomyelitis.

In compound fractures carbamide sulfonamide mixtures applied as first aid measures permit of long delay before definitive surgery. However, it should only be done in hospitals where there is sufficient time, material and technical skill available. Compound fractures resulting from gunshot wounds may be treated by sprinkling the wound with sulfanilamide powder in conjunction with the proper surgical treatment.

Experimentally sulfadiazine is the sulfonamide of choice in gas gangrene.

Bacterial contamination in stored blood plasma can be prevented by sulfonamide derivatives.

Caution in the use, as well as complete understanding of the action and criteria of choice of sulfonamides, is still necessary, despite the rapid progress that has been made in sulfa therapy. Further experimentation will doubtless reveal many more surgical uses for the sulfa drugs.

M. T.

INTERNATIONAL COLLEGE OF SURGEONS
MEMBERSHIP

For information about membership in the International College of Surgeons, address Mr. Ralph E. Osborne, Business Secretary, The Drake, 1512 Spruce Street, Philadelphia, Pennsylvania.

CHAPTER ACTIVITIES

BRAZIL

DR. MEM XAVIER DA SILVEIRA

DR. MEM Xavier da Silveira, young, brilliant Brazilian surgeon, has been visiting the United States recently at the behest of the Brazilian Government. He has been the guest of various universities and medical schools for the purpose of obtaining a perspective of the medical and surgical work done in the United States.

The Brazilian State Department spoke of him as "a man of outstanding merit in the field of medicine."

Dr. da Silveira is a graduate of the School of Medicine of the University of Brazil. He was honored by the gold medal award for surgery from his *alma mater.* He held an assistant professorship in the Surgical Clinic of the School of Medicine and Surgery in the University of Brazil, as well as in the School of Medicine of the University of Paris. He is a Member of the International Association of Anatomists of Paris and of the Argentinian Surgical Association. He is also an Honorary Member of the Society of Anatomical Embryology and Technical Surgery of Córdoba, Argentina and has been Lecturer in the Chair of Technical Surgery at the University of Montevideo. He is a Fellow of the Brazilian Chapter of the International College of Surgeons.

Dr. Mem Xavier da Silveira, F.I.C.S.

His latest contribution to surgical literature is "On the Simplification of Thyroid Surgery, Based on Anatomical Considerations."

He is an individual of much charm and individuality.

COSTA RICAN CHAPTER

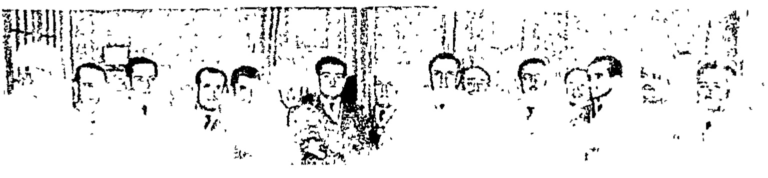
Dr. Rafael Angel Calderón Guardia, Vice-president International College of Surgeons.

ON OCT. 1, in solemn assembly, the Inaugural Ceremony of the Costa Rican Chapter of the International College of Surgeons took place in San José, Costa Rica.

The program consisted of the following: Dr. Ortiz C., secretary of the Chapter, read the minutes of the previous meeting, which were approved.

The constitution of the Costa Rican Chapter, based on the constitution of

Dr. Ortiz C., Secretary of the Costa Rican Chapter, delivering address.



Officers and members of the Costa Rican Chapter of the International
augural ceremony.

THIS collection of articles on various aspects of war medicine, written by a group of authors well known to the profession, has appeared in numerous publications during the past two years. Most of them were taken from the *Military Surgeon*, the *British Medical Journal*, the *American Journal of Surgery*, the *Connecticut State Medical Journal*, and the *New England Journal of Medicine*.

Los delirios en cirugia. Estudio de las perturbaciones de orden psicopático vinculadas a los procesos quirúrgicos. Eduardo Blanco Acevedo y José A. Aguerre (Hijo). 205 p. Publ. by the authors, Montevideo, 1941.

THE authors have contributed an exceptionally fine analysis of mental aberrations encountered in surgical practice. They stress that many psychoses are brought about by apprehensive conditions preoperatively, physiopathologic changes incident to operative trauma, and the various neurogenic instabilities postoperatively. In the stress of daily surgical practice, he often overlooks the important rôle of the mental attitude and psychic reactions of the patient. Many abnormal mental states may be remedied prophylactically, and certainly many patients may be restored to health by proper and timely therapy. The book opens with a general discussion of the various mental aberrations. An historical sketch precedes the concept and definition of the subject matter, which is then analyzed from the symptomatologic and psychiatric points of view. he classification of the morbid entities, and the pter dealing with anatomic pathology are engaging. The second chapter deals with the various delirious states as the result of infections. The factors responsible for the condition, the symptomatology, and prognosis, as well as the evolution of the morbid states, are lucidly described. The obstetrician will find an absorbing chapter on puerperal psychoses. It is pointed out that chronic infections may give rise to abnormal mental states. The various melancholias resulting from such conditions as chronic appendicitis, chronic osteomyelitis, gonorrhea, hepatic abscess, pulmonary suppuration, etc., are described. The discussion of mental aberrations resulting from exotoxic sources forms a *splendid chapter. Such syndromes as delirium* tremens and those resulting from auto-intoxications from all sources (gastrointestinal, renal), and those resulting from inanition and the anemias are thoroughly described and discussed. The mental affections resulting from the dysfunction of the endocrine system and vegetative nerve apparatus offer absorbing reading. The general surgeon and those engaged in industrial work and in war efforts will find much to garner from in Chapter 6. From the general surgeon's point of view, Chapter 7 is a veritable mine of information. Every problem has come under the searching analysis of the authors, who believe that the various delirious states not directly attributable to cerebral mischief are the expression of an acute or subacute intoxication of the cerebral mechanism. Such being the case, it is the duty of the surgeon, they point out, to search for the source of the psychosis and to eliminate it. Also, in the absence of any obvious inflammation, it is one's duty to scrutinize the genetic possibilities of the phenomena in question, and if of psychic origin, psychotherapy will bring about the desired relief. All-in-all, this reviewer sincerely hopes that this work will be translated into English, but those surgeons who read Spanish should certainly take advantage of the wealth of material which is encompassed in this volume of only 205 pages. The work concludes with a bibliography which is up to date, as well as an index. M. T.

Diseases of the Breast. Charles F. Geschickter, M.A., M.D., Director Francis P. Garvan Cancer Research *Laboratory. 829 pp., 593 illus. $11.* J. P. Lippincott Co., Philadelphia, 1943.

IN HIS new book Geschickter gives a thorough presentation of the etiology, diagnosis and treatment of mammary diseases, including much original material. The compendium of information on the mammary gland is exceptionally well organized. Its thirty-five chapters, arranged in seven divisions, treat logically the physiology and development of the breast, changes which occur during pregnancy and lactation, chronic cystic mastitis, neoplasms (benign and malignant), therapy, and finally experimental *production of mammary tumors.*

Dr. Geschickter's own laboratory experiments on rats and rabbits, described in Part VII, form the basis for conclusions as to the mechanisms of tumor formation and the interesting hypothesis that the secret underlying malignancy may be learned from the breast.

Dr. Geschickter discusses the endocrine theory of chronic cystic mastitis, the influence of hormones on diseases of the breast, and describes fully the two common groups of benign breast tumors, fibroadenomas and papillomas; besides, he treats thoroughly mammary cancer, stressing the importance of proper, early diagnosis and listing ten criteria for choice of therapy.

Dr. Geschickter's book is highly recommended to the diagnostician, the surgeon, and the specialist in mammary cancer.

M. T.

Gynecology, with a section on Female Urology. Lawrence R. Wharton, Ph.B., M.D., Associate in Gynecology, The Johns Hopkins Medical School. 1006 pp., 444 illus. W. B. Saunders Co., Philadelphia, 1943.

THE AUTHOR points out *that a large part of* the practice of gynecology is now medical and preventative, so in addition to surgical principles and operative procedures he has emphasized the care of normal women, prevention of gynecologic disease, differentiation between functional disorders and organic disease, keeping in mind the requirements of the medical student.

This volume combines gynecology and female urology, so that the obstetrician and gynecologist may have a single volume in which the closely associated urological tract is included. This is indeed a very happy combination. At the beginning of each chapter an outline is presented which is for the particular use of the student. Interesting historical facts have been included, which I believe have distinct teaching value.

Section II, which deals with embryology and congenital malformations, is presented in a simple concise and understandable manner. It is refreshing to note that the author did not go into a discussion of the theoretical differences which exist in modern endocrinology. He has tried very earnestly to adhere to established clinical facts. The chapter on the sympathetic nervous system, although brief, is very well done. The handling of the chapter on chemotherapy is excellent.

It was interesting to note that the daughter of Max Brodel, Miss Elizabeth Brodel did many of the drawings.

This fine work should receive a happy welcome from students and practitioners alike.

P. T.

The Doctor and His Patients. Arthur E. Hertzler. 316 pp. $1. Harper's, New York, 1942.

DR. HERTZLER is convinced that the only thing which can ultimately bring to an end the bloody confusions and conflicts of the world is "a mass appreciation that whenever there is a casualty some one's son has died." He looks for lasting peace "when the world at large comes to regard war as doctors do disease," and when the child and love for the child, purged of lust and selfishness, becomes "to civilization what the Klebs-Loeffler bacillus is to diphtheria."

His book, therefore, attempts to analyze the human environment in which the power of the child can be released for the regeneration of the world. It is, for the most part, a homely and sane discussion of the age-old problems of sex and marriage, of child-bearing and divorce. He is blunt and fearless in pointing out the areas in which the uplifted hand of authority—ecclesiastic and civil—still stays the biologist and the doctor as they seek to bring understanding and healing into the yet chaotic environment of the child, the home.

Readers may disagree as to how completely Dr. Hertzler has proved his thesis. But there can be no disagreement about the wisdom and tolerance with which the "horse and buggy doctor" has tackled the always fascinating subjects of love, marriage and divorce, touching with accurate diagnostic finger the underlying causes of domestic strife, frustration, violence, misery, and tracing the unfolding of love for the child—which he carefully separates from mere sex-lust—from the first instinctive solicitude of a little girl for her doll to the mellow ripening of affection in old age.

Here is a warm and human narrative, pungently seasoned with commonsense and the racy humor which readers of the "Horse and Buggy Doctor" rolled so zestfully on their tongues. It is a heartening reminder that, in these days when medicine tends to rely on the cold and accurate tools of science, there are still plenty of doctors who never forget to pack with the instruments and pills in their old black bags liberal and life-giving doses of plain human understanding more efficacious than any drugs.

Max Thorek

Apendicitis Cronica. By Fernando M. Bustos, M.D., Professor of Clinical Surgery, University of Buenos Aires. Editorial "El Ateneo," Buenos Aires, 1940.

THIS excellent monograph is a valiant and frank attempt to unravel the confusion that exists in our knowledge of this clinical and pathologic entity. The author emphasizes the importance of recognizing and treating the associated gr tro-intestinal lesions, particularly those of the col if appendectomy in the adult is to result in an amelioration of the symptoms. In support of this contention he shows the relatively high ntage of failures encountered in his own series of 5 operated cases, in spite of well planned pre- a post-operative medical treatment of the associat pathology.

The reviewer must take issue with the stateme that the pain of chronic appendicitis is aggravat during the menstrual periods in the majority cases. In the presence of such a history, the diagno tician should make every effort to rule out the po sibility of genital pathology. We are all too famili with the complaints of neurotic women who hav been plunged into a life of misery because of o or more surgical interventions for dubious pos operative adhesions that were supposed to have r sulted from an appendectomy for chronic append citis.

This monograph merits high commendation an is particularly recommended to the young pra titioner.

A. R. Larrain

Constitution and Disease: Applied Constitutiona Pathology. Julius Bauer, M.D., Professor of Clin ical Medicine, College of Medical Evangelists, Lo Angeles. 220 pp., 5 figs. $3.50. *Grune & Stratto New York, 1942.*

THE AUTHOR, as a result of his wide experienc and close observation of the end-results of o ganic harmony or disharmony in the function of the body, has written a concise volume which wil be a valuable and useful source of help to practi tioners of medicine. He stresses the importance o the Science and the Art of Medicine and the consid eration of the patient as an entity, not to be looke upon in sections as a piece of highly specialized ma chinery.

The rôle of genetics, the factors of heredity, an environment, and the effects of normal or abnorma stimuli on the individual are considered. It is re freshing to have the importance of the understandin of normal or abnormal states so clearly emphasize in the practice of medicine.

Endocrinologic factors are carefully considered, and a clear balance of judgment and suggested procedure is evidenced throughout.

It would be difficult to select any one outstanding chapter, but that dealing with principles of treatment, non-specific therapy, and pitfalls and errors should be completely mastered by every practitioner of the healing art.

The subject is timely for the alert practitioner interested in human biology, physiology and pathology. It brings to a sharp focus what is known about constitution and disease. If the contents of the book were completely mastered by the medical profession and as wisely used as by the author, the power and influence of the medical profession would tend to be lifted far above the baneful influence of charlatans and politicians.

E. Forrest Boyd, M.D.

Allergy. Eric Urbach, M.D., Associate in Dermatology, University of Pennsylvania School of Medicine. 1073 pp., 396 figs. Grune & Stratton, New York, 1943.

THIS work offers an excellent survey of allergy
its allied cc is. he author explains
principl including the pre-
ontribu While it is almost
condition he
is sfactory and
of allergic

diseases as well as the allergic reactions are manifold and multifarious.

He makes it clear that the study of an allergic person is connected with many different tests and difficulties and that it is dependent on environment, heredity and constitutional factors. He describes thoroughly experimental studies which have been carried on in this field, especially those in connection with antigens and antibodies. The author calls attention to the reactions of “false positive” and “false gative” and how to deal with them.

Of special interest is the chapter on allergic diseases of the gastro-intestinal tract, introducing the Specific Propeptan Diet.”

The author gives a sound and clear description of he allergic skin diseases and the allergic manifestaions of the different organs, such as the heart, joints, urinary tract and others.

The book contains excellent descriptive illustrations. The table of contents and index of authors deserve special attention.

The need of specialists, general practitioners and students for a book of this character has been apparent for a long time. This useful guide is recommended to anyone interested in the subject of allergy.

H. Sulzberger-Hartley

Urine and Urinalysis. Louis Gershenfeld, Ph.D., Ph.M., D.Sc., Professor of Bacteriology and Hygiene and Director of the Bacteriological and Clinical Chemistry Laboratories at the Philadelphia College of Pharmacy and Science. Ed. 2. 304 pp., 42 illus. $3.25. Lea & Febiger, Philadelphia, 1943.

THIS is a revised and enlarged second edition of the author’s well-known volume on the urine and its analysis. In a compact space the subject has been thoroughly covered, too thoroughly perhaps, for the busy practicing physician and even for the laboratory worker. Practically every known test and procedure is described and discussed, with the result that the hurried practitioner finds himself at a loss in selecting the one good, reliable test that will give him the information he desires. This is not mentioned as an objectionable feature of an unusually fine work, but the value of the volume as a working medium would be greatly enhanced if the simplest reliable test were singled out prominently and followed by others not so easily performed or applied or so commonly employed.

Beginning with a consideration of the structure and function of the kidney, the author passes on to the chemical and physical characteristics of the urine, describing its pathologic contents and its analysis, quantitatively, qualitatively and microscopically. The various special tests for pregnancy and renal function are fully considered.

While the author devotes much attention to the routine two- and three-glass tests in the diagnosis of urethritis, he fails even to mention the various modifications of these tests which have devised to correct the diagnostic errors inherent in the two and three glasses. While this omission may be considered unimportant, the general excellence and thoroughness of this work would seem to call for the inclusion of these important modifications.

Excellent illustrations accompany and clarify the text. The style is clear and simple. The volume is a most valuable addition to the working library of the physician and laboratory technician and deserves high commendation.

A. L. Wolbarst

Hope Deferred. Jeanette Seletz. 536 pp. $2.75. Macmillan, New York, 1943.

TIME was when medical students and young interns raised worshipful eyes to the Olympus where dwelt the gods of medical faculties and hospital staffs. If Miss Seletz knows today’s crop of young medicos—and there is every evidence that she knows them through and through—that time has passed. The eyes of budding physicians and surgeons are now focused, with relentless realism, on those feet of clay which always have protruded from the robes of deity.

The starry-eyed novice of yesterday was in for a shock of disillusion when he discovered that jealousy and politics and time-serving and even money-grabbing were to be found and coped with in the high profession he was entering. And, no doubt, the stern, uncompromising young judge, who sees through the pomposities and incompetencies and shams of his mentors with merciless justice, will come in time to temper his judgment with humanity. No doubt he will learn, as others have learned before him, that the dilemmas doctors meet really do have sharp horns, that unwillingness to seize upon the newest “discoveries” in the field is not *always* a mark of a mossback, that the doctor who, never sparing himself in the face of human need, becomes an early martyr of his profession *may* accomplish less for humanity than one who learns the patience to work within his human limitations.

The best evidence that Miss Seletz has written a significant book is that it is being avidly read by medical students and young people just about to enter medical training. It is uniquely their book. For, whereas many novels and medical biographies have devoted their chapters to a doctor’s training, this book devotes its whole 536 pages to that all-important period. In its first chapter, Jone Brent, fresh from the country and full of idealistic ambition, stands at the gates of Victor Horsley Medical School. As the book ends, Jone Brent, seasoned and sober, a little sick with “hope deferred,” speeds westward by train to begin his career as a neurosurgeon. In between are the episodes, gay and somber, momentous and trifling, personal and professional, which are stirred into the making of a medical education.

Miss Seletz, an excellent craftsman, with notable powers of observation and character delineation, might have blue-pencilled perhaps one-third of the book’s pages heightening the effect by compression.

Max Thorek

Advances in Internal Medicine. Vol. I. Editor J. Murray Steele. 292 pp. $4.50. Interscience Publishers Inc., New York, 1942.

THESE essays will be welcomed by the general practitioner as well as the specialist of internal medicine. There is so much material published in the field of practical and theoretical medicine that even the specialist can hardly keep track of his specialty. This volume contains valuable contributions by outstanding scientists.

W. O. Abbott writes about “Technique and the Use of the Miller-Abbott tube.” The exact description of its application is useful for diagnostic and therapeutic purposes. P. H. Lavietes points out the theoretic basis of the “Use of Insulin in Diabetes.” He pleads for the theory that insulin is necessary in the oxidation of carbohydrates. The author accepts the newer concept of the mechanism of keratosis.

However, his statement that high fat intake in any way impairs carbohydrate tolerance is questionable. Very interesting is R. H. Wilkins "Sympathetic Control of the Vascular System." This field is rather neglected and its methods should be used at the bedside. "The Antibacterial Action of the Sulfonamide Drugs" by C. M. MacLeod and "The Choice of the Sulfonamides in the Treatment of Infections" by C. S. Keefer will be appreciated by internists and practitioners as well, particularly for their excellent guide to the use of sulfa drugs. The same is true of "Infections of the Urinary Tract" by L. A. Rantz. The essay "Present Trends in the Study of Epidemic Influenza" of T. Francis Jr. shows the latest researche of this field. "Hypertension" of I. H. Page an A. C. Corcoran is a masterpiece of reporting The latest experiments appear to be very promisin as to successful treatment of hypertension. L. E Farr discusses the controversial problems of nephrosi and advances made in its treatment. "Riboflavin Deficiency" of H. Jeghers describes the recent clinica studies. His personal experience confirms the frequency of this deficiency.

To summarize, we should be very much obliged t the editor for this excellent collection of medica essays.

Otto Porges

Ancient history records that Pien Chiaco (255 B.C.) was the first to associate the pulse with disease. Wang Shu-ho (280 A.D.) wrote a treatise of ten volumes on such relationship. The physician was instructed to use the right hand for the left pulse, his left hand for the right pulse. The pulse of each wrist was divided into three bars, each of which revealed the condition of the internal organs. Thus, variation of the right pulse represented pathologic changes in the lungs and large intestine, and similar changes in the left pulse indicated disturbance in the function of the kidneys, bladder and spleen. The volume and rate of the pulse was divided into four classes. The first classification was compared with wood floating on water; the second was compared with a stone thrown in water; the third represented three beats to each respiration, and the fourth, six beats to each respiration. Prognosis was also determined by the volume and rate of the pulse. If the pulse resembled a bird pecking wood, death occurred during the next four days. Death was assured on the third day if the pulse compared with a feather floating in the air. A pulse which gave the sensation of a tense string resulted in death on or before the eighth day. If the pulse resembled rolling marbles, immediate death was suspected. Inevitable death was preceded by a pulse compared with a darting fish. Five hundred years later it was taught that the pulse presented certain peculiarities in the presence of pregnancy. A slippery and scattered pulse represented pregnancy of three months. If the pulse was rapid and unscattered pregnancy of six months was assumed.

H. J. Sims, M.D.

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Argentina

Actualidad Médica Mundial (Buenos Aires) Año XIII, Nos. 128, 129 and 130, May, June and July, 1943.

Anales de Cirugía (Rosario) Vol. IX, Nos. 1-2, March-June, 1943.

Archivos Argentinos de Tisiologia (Buenos Aires) Tomo XIX, No. 2, April-June, 1943.

Artroplastía del Codo. Oscar Busto. Buenos Aires, 1943.

La Revista de Medicina y Ciencias Afines (Buenos Aires) Año V, Nos. 5, 7 and 8, May, July and Aug. 30, 1943.

Le Monde Médical (Buenos Aires) Año LIII, No. 966, July-August, 1943.

Revista Argentina de Urología (Buenos Aires) Año XI, Nos. 11 and 12, 1943.

Revista Argentino-Norteamericana de Ciencias Médicas (Buenos Aires) Año 1, Nos. 1, 2 and 3, May, June and July, 1943.

Revista del Círculo Médico Argentino y Centro Estudiantes de Medicina (Buenos Aires) Año XLII, Nos. 487-491, March-July, 1932.

Revista de Cirugía de Buenos Aires (Buenos Aires) Año XXII, No. 5, May, 1943.

Revista Médica Latino-Americano (Buenos Aires) Año XXVIII, Nos. 331, 332 and 333, April, May and June, 1943.

Revista de Medicina Cancerología (Buenos Aires) Año XVII, Nos. 162, 163 and 164, 1943.

Revista Médico-Quirúrgica de Patología Femenina (Buenos Aires) Año X, Tomo XXI, No. 5, May, 1943.

Revista de la Sanidad Militar (Buenos Aires) Año XLII, Nos. 6 and 7, June and July, 1943.

Bolivia

Prensa Médica (La Paz) Año III, Nos. 4 and 5, June and July, 1943.

Brazil

Anais Paulistas de Medicina e Cirugia (São Paulo) Vol. XLV, Nos. 5 and 6, May and June; Vol. XLVI, Nos. 1 and 2, July and Aug., 1943.

Arquivos Brasileiros de Cirugia e Ortopedia (Rio de Janeiro) Tomo X, No. 4, 1942.

Arquivos de Cirugia Clínica e Experimental (São Paulo) Vol. VII, Nos. 1 and 2, Feb. and April, 1943.

Boletin do Sanatório São Lucas (São Paulo) Vol. IV, Nos. 11 and 12, May and June; Vol. V, Nos. 1 and 2, July and Aug., 1943.

Brasil-Medico (Rio de Janeiro) Año LVII, Nos. 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34 and 35, June, July and Aug., 1943.

Gazeta Clínica (São Paulo) Año XLI, Nos. 5 and 6, May and June, 1943.

O Hospital (Rio de Janeiro) Vol. 24, No. 1, July, 1943.

Revista Brasileira de Ortopedia e Traumatología (Rio de Janeiro) Vol. IV, No. 2 and 3, March-April and May-June, 1943.

Revista Brasileira de Tuberculose (Rio de Janeiro) Año XII, Nos. 87 and 88, May-June and July-Aug., 1943.

Revista Clínica de São Paulo (São Paulo) Vol. XIII, Nos. 4 and 6, Apr. and June, 1943.

Revista de Ginecologia e d'Obstetrícia (Rio de Janeiro) Año XXXVII, Nos. 1 and 2, July and Aug., 1943.

Revista de Obstetrícia e Ginecologia de São Paulo (São Paulo) Vol. VI, No. 3, Feb.-Apr., 1943.

Ceylon

The Journal of the Ceylon Branch of the British Medical Association (Colombo) Vols. XXXIV and XL, Dec., 1942 and Apr., 1943.

Chile

Medicina Moderna (Valparaiso) Año 16, No. 11, June, 1943.

Colombia

Medicina y Cirugía (Bogotá) Vol. VII, No. 12, Aug.; Vol. VIII, No. 1, Sept., 1943.

Costa Rica

Revista Medica de Costa Rica (San José) Año 10, Nos. 109 and 110, May and June, 1943.

Cuba

Anales de la Academia de Ciencias Médicas, Físicas y Naturales de la Habana (Havana) Tomo LXXXII, No. 1, 1943-44.

Boletin Mensual del Hospital de la Policia Nacional (Havana) Vol. II, Nos. 9 and 10, Sept.-Oct., 1943.

El Nuevo Hospital (Havana) Año II, Nos. 7 and 8, July-Aug., 1943.

Revista Médica Cubana (Havana) Tomo LIV, No. 7, July, 1943.

Revista de la Sanidad Militar (Havana) Año VII, No. 2, April-May-June, 1943.

Revista de Tuberculosis (Havana) Año VII, No. 1, Jan.-Mar., 1943.

Síntesis de los Fundamentos Científicos y de la

Práctica de la Vacunación Antituberculosa por el B.C.G. Pedro Domingo, Havana, 1943.

Vida Nueva (Havana) Año XVII, No. 6, June, 1943.

Mexico

Asistencia (Organo Oficial de la Secretaría de la Asistencia Pública) (Mexico, D.F.) Tomo VI, Nos. 23 and 24, July and Aug., 1943.

Boletín de la Sociedad Mutualista Médico-Farmaceutica de Guadalajara (Guadalajara) Tomo XV, Nos. 3, 4 and 5, March, April and May, 1943.

Cirujía y Cirujanos (Mexico, D.F.) Tomo XI, No. 8, Aug. 31, 1943.

Gaceta Médica (Villahermosa) Año V, No. 56, Aug., 1943.

Gaceta Médica de Mexico (Mexico, D.F.) Tomo LXXIII, Nos. 3 and 4, Aug., 1943.

Monterrey Médico (Monterrey) No. 92, Aug. 31, 1943.

Pasteur (Mexico, D.F.) Año XVI, Tomo I, Nos. 5 and 6, May and June; Tomo II, Nos. 1 and 2, July and Aug., 1943.

Revista de Cirugía (Mexico, D.F.) Vol. XV, No. 4, July 15, 1943.

Revista de Medicina y Ciencias Afines (Mexico, D.F.) Año II, Tomo II, No. 14, Sept., 1943.

Revista Médica (Puebla) Tomo XVI, Nos. 159 and 160, Sept. and Oct., 1943.

Revista Médica del Hospital General (Mexico, D.F.) Año V, Nos. 1 and 2, Aug. and Sept., 1943.

Revista Mexicana de Cirugía, Ginecología y Cáncer (Mexico, D.F.) Año XI, Nos. 5 and 6, May and June, 1943.

Revista Médica Veracruzana (Veracruz) Tomo XXIII, Nos. 9 and 10, Sept. and Oct., 1943.

Sugestiones (Mexico, D.F.) Año IX, Nos 97 and 98, Sept. and Oct., 1943.

Peru

La Reforma Médica (Lima) Año XXIX, Nos. 404, 405, 406, 407, 408 and 409, June, July and Aug., 1943.

Puerto Rico

Boletín de la Asociación Médica de Puerto Rico (San Juan) *Año XXXV, No. 8, Aug., 1943.*

Union of South Africa

Clinical Proceedings (Cape Town) Vol. 2, Nos. 6 and 7, June and July, 1943.

Union of Soviet Social Republics

Chirurgia (Moscow) No. 4, 1943.

Doklady Akademii Nauk (Moscow) XXXVIII, 1, 2-3, 4, 5-6, 7, 1943.

Voenno-Sanitarnoe Delo (Moscow) No. 4, 1943.

United States of America

American Review of Soviet Medicine (New York) Oct., 1943.

Boletín de la Oficina Sanitaria Panamericana (Washington, D.C.) Año 22, No. 8, Aug., 1943.

Información sobre Enfermedades Venéreas (Washington, D.C.) Apr., 1943.

Uruguay

Anales de las Facultad de Medicina (Montevideo) Tomo XXVIII, Nos. 3-4, 1943.

Archivos Uruguayos de Medicina, Cirugía y Especialidades (Montevideo) Tomo XXII, Nos. 4 and 5, April and May, 1943.

Venezuela

Boletín del Laboratoria de la Clínica "Luis Razetti" (Caracas) Año IV, No. 11, June, 1943.

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FRAGMENTS OF SURGICAL HISTORY

In 1805, Chaussier, a French obstetrician, proposed the use of a metal tube introduced directly into the larynx of infants who were born in a state of apparent death. Others, notably Dozes, attached a bellows to the tube as a means of restoring those suffocated. LeRoy, in 1827, reported to the Academy of Science the danger of emphysema and death following the vigorous use of the bellows. The method became unpopular. Depaul, in 1845, made an unsuccessful attempt to popularize the tube of Chaussier. Bouchut, in 1857, described tubage of the larynx for croup. Trousseau, who had popularized tracheotomy for this condition, opposed Bouchet and again intubation was lost as an art. In 1871, Veinlechner set forth the advantages of ouchut's method and again the method was not acceptable. O'Dwyer, in 1885, described a practical tube and air introducer and with few modifications it has remained the instrument of choice.

Cysts of the urachus are said to have been recognized by Wolf in 1873. Wutz, in 1883, reported a case and questioned the case report made by Wolf. The earliest information on the subject was given by Hoffman in 1870, and by Tait in 1883. Kroulein, in 1892, removed an abdominal tumor which had its origin from the urachus. Mecke reported finding urachus cysts in pigs; Sutton found them in moles, and Gurlt and Freer observed the same anomaly in the horse.

Marconi reported removing a prevertebral lymphosarcoma and a section of the ascending vena cava. Autopsy three years later revealed the establishment of collateral circulation through the ovarian, lumbar, phrenic and small azygos veins. It is now believed that the collateral circulation was established previous to the operation.

The tourniquet or "gripe-stick," also known as the garrat or Spanish windlass, was devised by Morel, a French military surgeon during the siege of Besançon in 1674, and by Young of Plymouth, England, in 1679. Morel's apparatus consisted of a compress of cord placed around the limb and tightened by turning two short sticks placed under the cord. Le Dran advised placing an additional pad immediately over the vessel and by the use of only one stick. Petit, in 1718, devised wooden plates through which passed a large set-screw. Tightening or loosening of the screw determined the degree of pressure. Esmarch devised the rubber band. Thomas, in 1898, devised an instrument similar to the Doyen's stomach clamp. One blade passed deeply into the tissue and the other engulfed the contour of the extremity.

William Alexander removed the superior cervical ganglia in 16 cases for the cure of epilepsy. Palmer, in 1835 or 1836, divided the integument down to the bone of the skull. Convulsions returned. He then removed a piece of the scalp and the number of convulsive seizures was reduced. Because of their return he trephined with results. White, in 1891, tabulated 51 cases subjected to trephining in which relief of symptoms occurred. In none of these cases was pathology demonstrated in the brain. McKinley, during the year 1855, performed five castrations with cures in all cases. Hall and Cane, separately, in 1851, performed tracheotomy for relief of epilepsy. They claimed results. Preston, in 1831, ligated the common carotid artery for epilepsy with favorable results. White, in 1891, tabulated 28 cases submitted to either ligation of the carotid or vertebral arteries.

The recognition of Meckel's diverticulum is said to have been first observed by Lavater. In 1701, Ruysch, in his book "Thesaurus Anatomicus" described this anomaly and named it "diverticulum." Morgagni, in his treatise on the "Seats and Causes of Diseases," describes diverticulum of the ileum. He also describes having found such a structure in an inguinal hernia and in geese. Meckel differentiated the diverticula which bears his name from acquired diverticula. He advanced the theory that it represented the remains of the omphalomesenteric duct. Elliot Coues, an American, 50 years previous to Meckel, described such an anomaly, but classed it as umbilical cæca. He further observed that this structure is frequently found in the lower family of birds, such as the Grallatores and Natatores, while in the higher order it is an exceptional finding.

Grynfeltt, in 1866, described a space known by his name. Lesshaft, in 1870, unaware of Grynfeltt's observation, described the same space and in Germany it is known as "Lesshaft's triangle."

H. J. Sims, M.D.

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